The Journal of the American Medical Association

VOL. XXVIII. CHICAGO, ILL., MAY 29, 1897. No. 22

ADDRESS.

"MEDICAL" LEGISLATION AND HOW TO OBTAIN IT.

The annual address of Section Three of the Illinois State Medical Society, delivered at E. St. Louis, Ill., May 20, 1897.

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Quantum animis erroris inest.—Ovid.

In these impatient days when science is aglow with the light of new discovery, the scientific mind naturally looks for sympathy and support from those following the same and kindred professions. The learned physician profoundly impressed by the wide vista which science has in so many ways opened to his view, can not but expect that the members of the other learned professions would concede his special knowledge and adopt general rules of action in conformity therewith, but to his utter disappointment he finds not only the legal profession but as well the Protestant clergy not only failing to see matters as he sees them but in many instances, arrayed in positive antagonism to his views, aims and wishes.

It is probable that the profession of medicine to fully receive that necessary sympathy and support must insist that the rudiments of medicine shall form a part of academical education, for as Blackstone has said "Sciences are of a social disposition and flourish best in the neighborhood of each other; nor is there any branch of learning but may be helped and improved by assistances drawn from other arts."

As laws are "rules of action prescribed by some superior, which the inferior is bound to obey," it is apparent that when that superior, as in this country, is the State or the Nation, the law must be equally binding on all, and that all have the same general interest in its application. That it shall contribute to the service of the public and benefit posterity should be the ultimate object of every public law.

It is too much the fashion to speak of medical legislation as the peculiar and special property of the medical profession and for their use, whereas in fact the general welfare of the people is the general object in medical legislation, sought to be attained in every instance, whenever it has been asked by this Society or kindred societies throughout the United States.

In an Illinois decision last year upon the question of the compensation of an expert witness, the Judge in referring to physicians applied the extraordinary epithet of "pampered children of the State" and actually spoke of the State Board of Health as having been created for their benefit. It is the public display of such misinformation and dense ignorance as this, that requires that proper academic education for all should include the elementary branches of medicine.

Had the learned Judge known only a little of collateral science he would have known that the function of a State Board of Health is the prevention of disease, and the prolongation of human life. Had he known the actual facts in regard to the Illinois Board of Health, he would have known that almost the entire expenses of that Board are borne from the license fees of physicians and not from the State treasury, and so far from the State supporting the medical profession, that abused profession sustains that portion of the duty of the State. It is unfortunate that so little hygienic work is now performed by the State Board of Health, but that is the fault of the Legislature and not of the medical profession.

This Society through one of the ablest committees it has ever had, formulated a bill for the welfare of the people, so far as protection from the impostures of quacks was concerned. Able legal advice was procured, criticisms and comments from medical societies and individual members of the profession were solicited; the energetic chairman, Dr. Pettit spent time and money to interest medical societies, secure information and perfect the bill. It was introduced into the legislature and died without a struggle. The disgust of those of us who observed its demise, was not mitigated but only deepened when we also observed with what eagerness, not to say actual yearning, the bill legalizing "osteopathy" was welcomed by a willing senate, and we are informed that this bill positively sailed through both Houses of the Michigan legislature without meeting any obstruction or encountering any opposition.

Thus it is once more demonstrated that in the opinion of the law-making body, pains-taking labor in the acquisition of a profession is an unnecessary strain upon the human constitution, when by a short course of "osteopathy, as it is taught in Kirksville, Missouri," all restrictions upon practice may be thrown off and the "osteopath" clothed with the privilege of the State, go at once into practice.

What stimulating "incentives" were applied to the law centers of the Michigan legislature, may never be known, but that other quacks came to the financial aid of the "osteopaths" there is little doubt. Something more than an X-ray will be needed to develop the unknown quantity here.

In Iowa the osteopathy bill was promptly defeated. They have twelve physicians in the Senate of that State, and about half that number in the House.

The bill introduced by Dr. Hall in our legislature providing for professional secrecy, it was thought would pass; similar bills had passed in other States, and it was believed that no sane man would object to a measure which provided for the protection of the patient and the guarding of his secrets in all except criminal cases. It was not particularly in the interest of the doctor, but it was in the interest of the people; but a doctor introduced it, it was "medical legislation" and therefore doomed to defeat in advance. Had

some advertising quack proposed it, instead of regular physicians, its claims might have been better; but as it was it had no friends, and we are told that in committee an old lawyer with snowy locks and hands trembling with age wrought himself into a storm of passion in denouncing it. The mighty shade of Cicero was invoked in tragic tones to help defeat this joint production of man and the devil. The awe-struck committee, conscience-smitten for having for a moment dared to look at a bill introduced by a physician, hastened to perfect their record by disclaiming lot or part in the bill and jumping on it as one man. Then another bill was introduced providing for some better laws in regard to medical expert testimony; a sincere presentation of the merits of the case had been made by the Medico-Legal Society of Chicago; its framers had the advantage of the experience of the best experts in the State; but all to no purpose, except to add to the record of defunct bills.

In National legislation the only measure that has been successful was the medical practice act of the District of Columbia; that is not an ideal act, but it is probably the best attainable. Ohio, Indiana, Wisconsin and Iowa have new practice acts; all of them recognize factional medicine by name and thus perpetuates it. The committee of this Society, as I think, wisely acting in conjunction with the committeemen from the State Homeopathic Society omitted specific reference to any of the medical sects. The understanding was that in the composition of the board those sects should be represented, and it is apparent that the laws which do recognize sects have done much to keep up sectional lines; besides that, where will it end? Beginning with a statutory recognition of homeopathy and eclecticism, then passing on to physio-medicalism and now osteopathy. Can any human mind compass the infinite subdivisions of true and false science to which we may at last come? No, my brethren, if we must have sects and offshoots from legitimate medicine let us not perpetuate them by tamely consenting to have them intrenched and made everlasting by statute.

What good will it do to recite the annual failures? None, perhaps, except by continual presentation of the case to stimulate renewed effort in this campaign of education, as our friends the politicians say. That the people are indifferent in the matter is unfortunate, but the indifference is due to ignorance, not to wilful intent; whether we can say the same of our legislators is, I think, doubtful; in any event I think it safe to say that continued agitation is necessary. We shall gain nothing by waiting for our posterity to step into line. We should adopt the motto of the Silent Commander when he planted his guns in the wilderness, and ourselves "fight it out on this line if it takes all summer," and trust that in time the vibrations of the pendulum may bring legislation in our direction.

Let us recall the fads and crazes, some of them now dim with the changes of the past, while each had its meed of popularity. Suppose with the present views of those concerned with our legislation we had present with us the Perkinists, who with the same unblushing effrontery that now characterizes osteopathy, paraded the same certificates of miraculous cures and by personages of equally high rank, and yet we know that our fathers knew that these same tractors were bits of insensate brass, unanimated by even an electric thrill. Perkins had, however, higher aspirations than he of Kirksville, Mo.; having conquered New England with skill and speed, he crossed the Atlantic and invaded the great city of London, where he soon set the fashion by the aid of the magic tractors. Lords and ladies vied with each other in the possession of the precious brasses, and when the faculty ventured to remark, *sotto voce*, that Perkins and his tractors were frauds and should not be recognized as methods of treatment by persons possessing average common sense, then the cry of bigotry, fanaticism and old fogy was raised; the American wit of the day, T. G. Fessenden, an American poet then in London, was employed to lampoon the Royal College of Physicians. This he did quite to the satisfaction of the Perkinists in a satirical poem entitled "Terrible Tractoration!! A poetical petition against galvanizing trumpery and the Perkinistic Institution, in four cantos, most respectfully addressed to the Royal College of Physicians by Christopher Caustic," one English and two American editions of this precious poem of ninety years ago are extant (a copy of which is in my own library), and on perusal I must say that the omnipresent Dr. Still has practically the same grounds for his opposition to the regular profession of today as Perkins had one hundred years ago; but who now mourns for Perkins, while "there are other pebbles on the beach." I suppose if he were here in the flesh we should be compelled to stand by while some able legislature enacted that tractoration as practiced by the immortal Perkins should, to use the language of the bone-o-paths, "not be considered as the practice of medicine within the meaning of the acts regulating the practice of medicine in the State of Illinois." And the Thomsonianism, with its alleged four elements, *earth*, *air*, *fire* and *water;* why does not the steaming ghost of its immortal founder arise and demand "recognition" at the hands of a compliant and awe-struck legislative body?

In reflecting upon these fads and impostures of the past, we can afford to smile at the temporary elevation of the impostures of our own time, knowing that the day will come when they will be numbered with the absent, and that "the dead and the absent are always wrong" by unanimous consent. But will medical legislation always be at cross purposes with the best interests of the community? Let us hope not. Let us reflect that we have two ways to be heard in the legislature, one is to make sure that we send friends to represent us in that body, and the other is to send physicians to the legislature and to Congress. Those in the active period of busy practice need not be sent, but those of mature years, whose experience in every day affairs would make their opinions generally valuable, and who have attained standing and dignity in the profession. I have in mind now two retired physicians, in my own city, yet in mental vigor whose ripe experience makes them welcome at any medical gathering, and are fully capable of taking hold of State questions and matters medical of medical legislation. Indeed the whole country would gain the benefit of their wisdom if they could be put in position to exercise it for the public welfare.

Shall the doctor go into politics? you ask. I say yes, if he can personally afford it and is of ripe experience. We may never hope to have correct medical legislation until we are either properly represented in the law-making body, or the community in general shall have elementary knowledge of medicine; the

latter is probably not practical in our day, and only the former course is open.

No sincere patriot need ever fear in this country to speak his political sentiments or to speak openly in defence of his principles so long as he is governed by pure and patriotic motives, by love of right, and by affection for his country and its flag. Virchow in Germany and Nathan S. Davis in this country have never hesitated to speak out when they thought the exigency demanded, and we have never heard that the people thought any the less of them on that account. Nor of Dr. Joseph Warren who made "incendiary" speeches on Boston Common, and fought in the line at Bunker Hill! Nor of Dr. Benjamin Rush, one of the Continental Congress and signer of the Declaration of Independence.

Put medical men endowed with such noble independence in the legislature and in the halls of Congress, trained by long practice and close contact with the people; they would consider the general welfare as above every earthly consideration. It is said that our profession does not and can not breed statesmen or orators, but let us recall that saying of William Winter, that "there is a better thing than the great man who is always speaking, and that is the great man who only speaks when he has a great word to say."

The acts of the members of the profession in the Iowa Legislature have demonstrated to the world the wisdom of the electors who sent them there.

ORIGINAL ARTICLES.

MEDICAL PROGRESS AS INFLUENCED BY OPPOSITION.

Read before the Florida State Medical Association at Palatka, Fla., April, 21, 1897.

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The subject of this paper is *Opposition*, especially its results, as observed in the progress of the science and art of medicine. But it is unnecessary that we confine ourselves to a medical view of this subject. During every day its influence may be observed, if not experienced. And how various are its results! We have seen people driven to despair, even to the extent of self-destruction, by blind, ignorant opposition. People who stood ready to bless the world with the fruits of their genius, but who died, crushed by neglect and contempt, and the consciousness that those who spurned them, and not they themselves, were most injured. Such a predominating consciousness of one's responsibility to his day and generation may not possess every man, but some it does, and the world does not always recognize them, nor hardly realizes what it has done when it has quenched such a spirit. The path of advance is strewn with the remains of those who have succumbed to the pressure of a force greater than they could endure.

The history of the political life of every people is largely a record of apparently fruitless effort of a few against the resistless inactivity of the many. Every difference, insignificant or of international importance, is an instance of the generality of our subject. In every contest are represented two sides, both right to a certain extent, and the champions of one side must fail. Every war represents a sacrifice of lives and interests to a superior force. It is unnecessary that there should be any right in such cases. Both sides may be admitted to be wrong. But when an individual's allegiance has been won, the fact becomes apparent that he is working for a purpose, which, for the time, may mean every thing to him, and that his failure or success has a significance of its own, independent of extraneous circumstances.

Our every-day business life shows the same conditions. It may not be amiss to suppose that every improvement in detail, every advance in method, represents the life-work, and may be the apparently unsuccessful life-work, of a man. The list of business failures in any of our great papers is an instructive but melancholy illustration of our subject and its results. A most important part of our business world is represented by the mechanical arts and sciences. In this particular branch of work, opposition may, to a great extent, be defined as being ignorance of physical law as it is observed in the various materials with which mechanics have to do. In other fields, ignorance of human nature constitutes a large proportion of the opposition which is encountered. In no other department of our industrial world has there been greater improvement, showing a corresponding activity. Our patent office is deluged with devices of every conceivable description. Many a man has spent his life in trying to prove to the world the value of his idea or design, and given up in discouragement, when he was right.

The history of religion probably contributes more instances of apparently fruitless effort than any other subject at our command. So accustomed at times have devout people become to doubt and opposition, and their results, oppression and wrong, that they have attempted to find virtue in necessity, and pleasure in their trouble. Hence we find fanatics glorying in tribulation, not from high and pure motives, but from the delusion that there is virtue in suffering, independent of the high principles which may at first have led to it.

In the history of medicine we see that great achievements have been preceded by great sacrifices. Only great men are capable of great sacrifices, and yet such men are not always recognized. Men have striven in obscurity and neglect, and have succeeded in sowing a harvest to be reaped by others. But our profession is not behind others in recognizing the merits of its deserving members.

The efforts of Hippocrates, Aristotle, Galen, Vesalius and other patriarchs in medical history have received ample recognition. Their difficulties were such as few of us can comprehend, and their achievements are justly regarded with veneration. Harvey's trials and discouragements have given to his discovery an added brilliance. The glory of Jenner's achievement is not lessened because we know that while he was working to convince people of the great value of his gift to them, he was the most abused man of his time. Abominal surgery owes, in great part, its present development to the impetus given it by McDowell, who operated under unique and dangerous conditions. We are told that ignorance and prejudice threatened his life. To Sims we owe an important surgical operation, and the subsequent impulse given to that class of work. In his book he tells us of his work, pursued under difficulties and against opposition, apparently sufficient to discourage him. Pasteur, thinking and working independently of precedent and careless of ridicule, gave us bacteriology, a science which is taking an important place in relation to every department of medical and surgical work.

But it is unnecessary to enumerate at greater length. The instances given suffice for our purpose. An effort has been made to keep in view the fact that the various instances of progress noted have encountered opposition and repulsion. These isolated facts have been used to indicate an universal condition, a fundamental truth. Since we have to do with a condition which, to a greater or less degree, affects each and every one of us, it will not do to try to explain it away. It is a ghost which will not down. It may be well to inquire why every new fact, every attempt at progress meets opposition, not only among the insignificant and irresponsible, but among the ablest, the most progressive men.

In the first place, it may be repeated that there are two aspects to every proposition. Every fact, every circumstance, has associated with it modifying conditions which make a plausible positive or negative argument possible. By keeping this point in view while studying a subject important errors may be avoided.

Opposition may be included in two classes; reasonable and unreasonable. Unreasonable opposition may be disposed of in a few words, as being due to either jealousy or ignorance, or both. For our purposes it is unnecessary to inquire into these causes. But the other kind of opposition, reasonable opposition, merits our attention.

The most probable cause of reasonable opposition is a natural hesitation to adopt every novelty which may be presented. This hesitation is the result of experience. Repeated disappointments in ourselves and others, warn us to make haste slowly. A famous lyric poet is credited with saying in his haste, "All men are liars." While we may hesitate, for personal reasons, to accept so radical a statement, it is astonishing how many such people are met. Two instances will illustrate the idea as it is sometimes observed.

At a meeting of prominent surgeons one described an operation which he had performed, laying stress on a particular detail, to emphasize which he presented a specimen which he had removed. On inspection the specimen was found to be deficient in this very matter, thereby making the operator unpleasantly conspicuous, though the point was of minor importance.

Another instance illustrates the point in view under different circumstances. A surgeon while visiting the hospitals of our large cities, saw that the reports sent out from a certain institution were uniformly false. In these reports no reference was made to mild cases of sepsis, or other such complications following operations, thereby rendering their records of no value to those who might be working along similar lines.

In those cases, the errors, one unintentional, the other intentional, were made by men of acknowledged ability and high position. No reference is made in this connection to individuals whose countenances adorn the advertisements of cure-alls in the secular press, or to persons whose signatures are appended to eloquent testimonials to the definite effects of indefinite nostrums. Such facts make thinking people slow in reaching conclusions. In the medical profession this amounts to a conservatism which no man's authority is sufficient to break through. Positive proofs must accompany every claim to consideration. Herein is one of the most efficient barriers against fraud. The consciousness that every detail will be sifted, criticised, examined, misconstrued, forces a man to do this for himself, whether he will or no. And in doing this, he works, laying the foundation of all excellence. Were it not for this conservatism every medicine vender, every theorist would have only to present a nostrum or a hypothesis, to receive universal recognition and endorsement.

As a modification of this hesitancy in accepting innovations, may be mentioned the fact that the simple presentation of a theory or an idea, stimulates opposition in some people. Having no knowledge nor clearly defined opinions concerning the point at issue they assume a negative position, which would seem to have been suggested by contact with the affirmative. Thus we see that either side of every question has champions, who appear to have been created by the emergency.

Another cause of reasonable opposition is found in mental bias of every individual. No two people comprehend equally the same details when viewing a landscape or a proposition. Looking at a specimen of architecture, some may be attracted by color, its various combinations and general effect. Others may notice particularly the various details of form and outline. Others may have a tendency to study the peculiar relations of parts to each other, and to the whole. Still others may look past color, form and architectural effect, to the probable cost. Every other person will not see a proposition as we see it. Every detail will have a different significance to every observer. One result of this fact is that this bias gives a direction to study and investigation, which, if followed far enough, leads to an abnormal mental condition, absurdity. Perception is distorted. Facts are made to conform to our conceptions. That which is desired is seen. If a remedy is sought for a disease, it is found. When found, every sick person is seen to have this disease, and every recovery is credited to the remedy. The natural protection from this danger is that every one has the same complaint to a certain extent, and, by persisting in riding his own hobby, limits the ability of any one to ride his hobby to his own, or another's hurt. As a result of this conflict of many opinions, truth is finally seen, and order arises out of chaos.

The different environments of individuals account for many differences of opinion. An operation or a therapeutic exhibition, which may be a matter of routine hospital work, may be practically impossible under certain conditions. An attempt to use them results in failure, partial or complete. Want of success leads to discouragement and doubt as to the value of such measures. This may not be good logic, but it is a fact, as many of us can testify, and as such merits our attention. Facts are not disposed of by a comment of the illogical.

Again, supposing that the conditions are practically the same, people have a preference for things to which they are accustomed. A surgeon performs an operation with greater dexterity and better results than the modification which another surgeon performs. A physician has better success with remedies with which he is acquainted by long experience than with the therapeutic suggestions with which medical literature abounds.

One of the most important, and probably least understood causes of differences in results, and consequent differences in conclusions, is in people. No two

individuals are exactly alike, and yet individual differences are difficult of determination and interpretation. It is impossible to say that a certain disease affects an individual exactly as it did affect, or will affect, another individual. There is a certain resemblance among the grosser details of disease which justifies a classification, but the more subtle points can not be included in such a generalization. The fact that it is so little understood would indicate it as a most convenient shield for the errors of incompetence and trickery. But, because a fact may be misused, it is not to be taken for granted that it is of no use. Further study and investigation may throw such light on idiosyncrasy as to make it an important aid in medical practice.

If my propositions are admitted to be probable, it would appear that opposition is not altogether a thing of evil. Undoubtedly in the practice of medicine, it directly accomplishes much good by protecting the profession and the public from imposition. This is only a negative effect. Its positive, or indirect results are far more important and beneficial.

There are few things so stimulating, so inspiring, as opposition. Without opposition there would be stagnation. Ambition is its legitimate offspring. Were there no resistance, no obstruction, there would be no honor, no reward. The great incentive to labor would be wanting. Duties would be performed carelessly or not at all. No one strives for what all may obtain. Difficulties surrounding an object enhance its value. In many instances the pleasure of overcoming difficulties, the consciousness of having accomplished something worthy of us, is a sufficient reward. The object sought becomes of secondary importance. We encounter opposition under circumstances which make it necessary for us to rise above ourselves to overcome it. By rising to the occasion we become better and stronger. We add so much to our mental and moral stature. To opposition we owe most of the great moral and intellectual trophies bequeathed to us by former generations. Some of them are evidences of that peculiar and obscure force known as genius. By far the larger number is due to the earnest, steady, enthusiastic efforts to overcome difficulties by representatives of that great mass of humanity known as "the people," "the common people;" more correctly the typical, the normal, the intellectually, morally and physically healthy people. People who have not been dwarfed by the demands of our social customs. Those are they who are able to overcome difficulties.

Opposition presupposes movement. Not till a body begins to move does it encounter resistance to its progress. Insignificance attracts no notice nor criticism. An intellectual or physical fact may be considered as stationary, inoperative until it arouses resistance.

The lesson to be learned from this is so obvious that it is needless to enlarge upon it. It appears unfortunate that our ideas should prove faulty, our plans fail under the rebuffs and discouragements of opposition. It must be unfortunate. Our ideas are adopted, our plans laid, because they represent right to us. It is no small matter to know that our conception of right was wrong, even in an insignificant detail. The principle is the same, in great and small things. If we do our part well we can not afford to ignore results. By giving them our attention, using them as object lessons, we may learn to avoid similar errors and overcome similar difficulties, thereby appropriating the only good in a mistake.

In the instances of medical progress referred to, each one was distinguished by an important characteristic: each one was a fact, an intellectual and physical fact. The circulation of the blood, vaccination and bacteriology are no visionary theories. Investigation, study and examination can not destroy facts. The refining fire injures and destroys refuse, but not gold. The great workers in our profession try their facts with fire seven times hotter than they expect others to use. When they present an idea they feel that it can stand any test, for have they not used every test? If one has anything which will help to advance science and benefit humanity, the object of all science, let him prove it; be sure that it is something of value, not the premature fruit of a vain and indolent imagination. Knowing this, there need be no hesitation to present it because of expected opposition. If an idea is valuable, criticism will demonstrate it. Expecting discouraging resistance it should be prepared for. Every possible contingency should be provided against, every fault and deficiency removed, and an idea, an operation, a therapeutic suggestion, presented which will not need defense. Success may not come in a month, or a year, but facts, which are truths, will ultimately prevail, their success being in a great measure the result of opposition.

THE DELIRIUM OF SHOCK.

Read at the Third Annual Meeting of the American Academy of Railway Surgeons held at Chicago, Sept. 23, 24 and 25, 1896.

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I have purposely substituted this title as the subject of my paper for the reason that "Traumatic Delirium," as announced in the program, does not apply to all cases of delirium accompanying shock, especially to those cases termed, unwisely I think, "hysteria." That many functional conditions following traumatism, or nervous shock, may be of that character I have no doubt, but I do not like the term and I am certain that in many instances the delirium of shock results from pure psychic shock and sometimes proving fatal, even when unaccompanied with any actual traumatism.

What is this peculiar psychic condition to which we briefly call attention? Has it ever been full and satisfactorily explained? It has seemed to me, from an extensive experience with surgical cases and a personal observation of many of them attended with this strange and singularly fatal element, that the subject is of considerable importance.

Some authors claim they have never observed recovery in any case of severe traumatism attended with this form of delirium, and this has been—up to a recent date—my experience. I have, however, met with cases of pure psychic shock, not traumatic, attended with what seemed to be or at least simulated closely the delirium of shock.

I will cite one case, an engineer, whose engine came into collision, knocking the cab into kindling wood. He jumped off and fell upon one knee in the gravel, slightly bruising the skin over the knee-pan. He stoutly asserted that his limb was crushed, and while they were conveying him home upon a stretcher, continually cried out, "Oh! go and get my leg," screaming at the top of his voice the same song without change

of tune or tone, and the sight of his leg or my argument and most emphatic assurances made no impression upon him. He appeared to be in terrible agony, his anguish so pitiful as to excite the crowds of sympathizing friends almost to frenzy. When I had satisfied his friends that he was not injured at all, and they began laughing at him, he sat up, took a careful survey of his limb and emerged from his delirium.

I do not deem it necessary for me to give a recital of numerous cases of this peculiar inversion or perversion of mentality. I wish, however, to cite a case of pure delirium of shock accompanying a severe and fatal traumatism. A man and his mistress were run over by an engine, picked up and carried into our elegant temporary hospital, the baggage room. The man died in a few moments, and the woman lying by his side with a severely crushed leg, seemed utterly oblivious of her condition or his presence; answered questions promptly and correctly, giving me her name, residence, etc., said she was "in no pain." "Oh, I am all right, doctor," sang merrily and chatted lovingly, as she seemed to think, with the husband she had dishonored and left, and seemed to be going rapidly over her happy married life, but with no allusion whatever to her paramour or her injuries, ignoring anything said to her upon either subject, and yet seemingly perfectly rational when asked her name, residence, etc. When asked if her limb hurt her, lifting and examining it at the same time, she answered very promptly and frankly, "No," and at once resumed her happy songs and loving chat. At that time she had no perceptible pulse and, in fact, died in a short time. This case is perhaps a fair illustration of the delirium of shock.

I will only impose upon your patience and credulity by quoting one more case, similar to the above, but with different result. In this case the man, age 22, was run over by a loaded box car, the flesh crushed and entirely torn from the bones of the leg and thigh up to mid third, requiring amputation in upper third. There was slight manifestation of delirium and utter oblivion, as in the case just mentioned, of his injury. He would look at the mangled flesh and denuded bone, and then without seeming to realize that he was seriously hurt, would ask me if I would have him fixed up in a few moments, so he could go home. There was no mental excitation in this case. The loss of blood was considerable, pallor, lowered temperature, pulse, etc., indicated a grave degree of shock, and in fact, this case was typical of many I have seen which have proved fatal, and I fully believe this one would have proved so, but for the modern heroic measures for the restoration of vitality. The intravenous saline injection, hypodermic injections of nit. strych., nitro-glycerin, etc., and external heat were used, and this case, which I had pronounced fatal, made a nice recovery.

Now, gentlemen, I believe the other case—occurring some years prior—might have been saved in spite of the fact that she exhibited in more marked degree the delirium of shock, as her injuries were not apparently as severe as in the latter case. I have an idea that the modern treatment of shock may perhaps change materially the experience of surgeons as to the fatal indication of this form of delirium.

The delirium of shock met with upon the battlefield, with its attendant exciting environment, is in many respects similar to that observed in railway accidents. I have passed among the wounded after some of the great battles in our late war, and noted numerous instances of this peculiar delirium. The "shock of battle" in itself produces delirium, as I well know. I was not conscious of a severe wound until my attention was called to it by others. The awful groans of the wounded and dying, of which the historian and poet tell us, were often mingled with the chattering and happy songs of the mangled and expiring soldier, and in both instances, as a rule, the victims were unconscious of any actual mental or physical suffering.

Intense and unquenchable thirst is usually, and invariably I might add, the greatest suffering experienced by the wounded. Who has ever yet satisfactorily defined or explained this awful thirst for water? What is the condition which checks the sufferer in his muttering or delirium, and prompts him to ask coherently, often imperatively, for water, thank the giver, and relapse into a condition of unconscious anguish? Is it dissolution, molecular disintegration of vital nerve centers, or a peculiarly disturbed and exalted mentality, akin to catalepsy or hypnotic suggestion? The functions of the brain seem sensible and exalted, often keen and brilliant. These cases certainly exemplify the fact, that severe traumatic conditions are not usually attended with much pain during the manifestation of shock; are they hypnotized by their terrible environment into a condition of anesthesia?

A very plausible explanation of the cause of serious and fatal shock, with its attendant symptoms of delirium, etc., seems to be the molecular disintegration of the nerve centers, or nerve fibrilla. The impaired respiration, diminished arterial tension, cardiac depression, musculo-cutaneous anesthesia, sub-normal temperature, etc., would certainly indicate this. Certain it is, the brain often retains its functions to the last, exalted and bewildered, it is true, but still the citadel of the mind, obeying its demands, even when the bodily functions are paralyzed and undergoing rapid dissolution, and acting with unusual rapidity.

I have often heard dying men give instruction as to the disposal of their effects, describing accurately where they could be found, and going into details that a lawyer would not think of, as though conscious that dissolution was rapidly approaching and yet apparently unconscious of their physical condition, or the nature of their wounds. It is a pitiful and strange scene to witness the dying look, keen and yet vague, brilliantly pale, almost phosphorescent; the bright, keen and shimmering eye; the hoarse and gradually fading voice; the imperative, pleading, pathetic demand for water! more water! as if its cooling influence might assuage the awful anguish. The poet exclaims:

"Death having preyed upon the outward parts,
Leaves them insensible; and his siege is now
Against the mind, the which he pricks and wounds
With many legions of strange phantasies;
Which in their throng and power to that last hold,
Confound themselves; 'tis strange that death should sing."

Charcot, Oppenheim, Strümpell, Guion, Thorburn, Dreschfield, Weir Mitchell and others seem to be exponents of the theory that hysteria enters largely into the element following traumatism in many cases, but others dissent from this view, and it seems to me wisely. I do not myself like the term "hysteria," especially when applied to such conditions.

In Georges Guion's work we learn that "many of

these disorders arise, not so much as the result of an immediate cause, but from the state of the nervous system being such that an exciting cause is able to provoke it to the manifestation of functional disorder."

Page, in his admirable work on railway injuries, claims that "these nervous disorders have their beginning in profound mental shock, and the cause will be found in the cerebral cortex, and that the mandate of the brain through the spinal cord is checked, as indicated by inability to protrude the tongue or move the limbs."

There is no doubt in my mind that the suggestion, or autosuggestion element, enters largely into these cases, and might properly be termed "traumatic suggestion," but for the fact that they are observed in cases of psychic shock unaccompanied with traumatism.

Railway accidents are usually attended with an element of severe nervous shock, not only to the injured, but to every one present. My experience has demonstrated, to me at least, that there are distinctive features in railway shock, and I believe the element of psychic shock is far more common in such accidents than in those met with elsewhere.

It was not my intention to go extensively into the discussion of shock, or to quote at any length the views of authorities upon the subject of the delirium of shock, but simply to call attention, briefly, to some points relative to the importance of this peculiar and usually fatal indication, believing that a more thorough examination and discussion of the subject at the hands of the learned gentlemen of this Academy might result in a better understanding and improved methods of treatment of the more severe forms of shock. The practical application seems to be that we should bend all our energies and efforts to overcome this element called traumatic shock, especially those cases attended with delirium, unless, indeed, the poet be right in assuming it to be dissolution or death.

I am frank to say that up to a recent period I have invariably given an unfavorable prognosis when this *well-defined* indication of grave element of shock manifested itself and did not feel warranted in resorting to measures for its relief when accompanying severe traumatisms.

DISCUSSION.

Dr. JAY—Delirium is a disturbance of the cerebral functions manifested by impaired action of the nerve centers, characterized by hallucinations.

Shock is the depression or grave effect produced by severe injuries, operations or strong emotions; a relaxation or suspension of the sustaining and controlling influence which the nervous system exercises over the vital organic functions of the body. It is the result of a profound impression made on the cerebro-spinal axis, either directly through the agency of an afferent nerve or through the circulating medium. There is a peculiar condition in which the manifestations of shock are due not to severe bodily injury but to purely mental causes. This variety of shock may be even more profound than that produced by bodily injury. The mental impressions produced by railway accidents come under this head; while the precise change which takes place in the cell structure of the ganglia of the cerebro-spinal system, to produce the delirium is caused by a change in cell relations produced by the shock, either bodily or mental, certainly seems plausible. It may be that the cell structures of the brain are unduly stimulated as in the delirium of intoxication, or from an anemic condition as in low grades of fever accompanied by delirium. A child will become delirious from mechanical irritation of the digestive tract reflected through the spinal cord to the brain. In any and all forms of delirium there must be a change in the physiologic condition or the anatomic relation of the cerebral cell structures, and does it not seem probable that the anatomic relations of the cells have been temporarily changed; that the shock has disturbed the natural relations existing between the minute cells; any such disturbance of the cerebral cell structures must disturb or derange the mental processes, and the disturbance of the mental processes is the delirium? This disturbance of cell arrangement may be that the location or position or peculiar grouping together of the cell structure have been temporarily changed and the delirium will continue until the physiologic relations have been restored. Mental processes may produce this change in cell arrangement, and delirium follows. The part or organic structure involved must be the same, and similarly affected in all causes of delirium or else the mental processes do not have a fixed and definite location through which to make manifest their marvelous doings, or in which to record their wonderous achievements. In delirium the intellect or mind is not impaired, but the organic structure, through which the researches and investigations of the intellect are made known and in which they are recorded, are not in perfect condition to receive them, hence the wandering. Often this cell derangement is soon restored by rest and quiet alone. At other times help is furnished by medical aid or surgical assistance. Whenever or by whatever means this is accomplished the delirium has ended, the intellect commences where it left off, at the beginning of the delirium, and the individual is himself again.

Dr. COLE—Dr. Jay, who opens the discussion, has talked about everything but delirium of shock.

Dr. JAY—That shows how little you know about it.

Dr. COLE—That shows, Mr. President, how little any of us know about this subject. We know no more today than our forefathers did a hundred years ago about shock, and until some one gets ready to make an exhaustive and systematic explanation upon the different orders of animal kind we are not likely to. The French school, strange as it may seem, disclaims any such condition as shock and traumatic shock. I say strange as it may seem, because the French are of a neurotic temperament, and it is generally agreed that shock has to do primarily with the nervous system. We know that a snake's head may be cut off and they will live not only till sundown but perhaps several days; we know the same thing is true of other animals in the lower orders. Those of us in active practice know that the cases where we get what is called shock most pronounced are, as a rule, among patients of a nervous temperament, whether it is molecular changes, or whether it is as the French claim entirely due to the loss of blood—which claim to my mind is ridiculous because we have all seen shock where there was no excessive hemorrhage; whatever it may be, no one has as yet been able to determine, or give a satisfactory definition of shock. We see it in so many forms, including the delirium of shock which the author has so beautifully written about. It would be desirable if this Academy, representing an important branch of surgical practice, a class of surgical work where this element so largely predominates, could in some systematic way elucidate this subject.

Dr. REED—Just one point I wish to call attention to in this discussion. I do not propose to try to throw any more light on the question, but I do not think it is quite the right thing to allow the remark which our distinguished Fellow made, to go without a little check on it. I think the Doctor did not intend the meaning to be conveyed which seemed to be conveyed in that respect, and that is that shock was the result or might be the result of the shaking apart of the cells of the brain or the spinal cord. The point I wish to make is this, that while that has been advocated I do not think there is good reasonable ground on which to establish a theory that would carry it out.

For instance, a man is shot through the head—and I have seen more than one person shot through the head fall down and get up and walk off—and there is some shock, and the man gets well after all this. I saw a man in whom I am sure the cells were very much torn; he had a buzz saw cut his skull open from the occiput to a point between the eyes tearing out the sinus—and not a small buzz saw but a large saw—and that man got well to my positive knowledge and lived ten or twelve years afterward; and I made a postmortem—after his death, of course (laughter). The point I want to get at is this: There was a very marked disturbance of the cells of the brain, and yet that man did not have any marked shock, he did not have any delirium. I know another case that was hurt on a railroad in an accident near Loudenville, O., the whole side of the head was crushed in; that boy got up and in less than two minutes he walked two blocks from the engine leaving a part of his brain lying on the platform, and dripping over him, and he did not become delirious. I begin to think that the theory which the doctor did not qualify, is untenable ground, and we should be careful in taking such a position, first, because it is not tenable, and second, because we have "our friends, the enemies," ready to say that is the cause of all the spinal calamities we go into court with. I do not think it is right to take that ground which is dangerous and which has a foundation not absolutely tenable. I simply bring these cases up as evidence that it is not always, at least, shaking up the nervous system that produces delirium.

Dr. BRYANT—I am not a pathologist, but I have a friend who is a histologist and pathologist, and he tells me that all cells, nerve cells as well as others, eat, grow, reproduce and have motion; and as a pathologist he says shock is due first to lack of eating—nutrition; he tells me the loss of blood will cause shock, interfering with nutrition; anything, like joy, grief or fright, which will interfere with digestion will also cause shock—it interferes with the nutrition of the nerve cells—and that is as far as I can go in this matter; but I think that is correct, and perhaps time will prove it.

Dr. HARNDEN—I had thought perhaps I would elicit some information on the cause of the peculiar condition. I find I have failed in my object. I am satisfied we will not be able to find the cause, the peculiar condition. I do not think I have expressly stated in any part of my brief paper anything which explains the condition to my mind or to yours; I thought Dr. Reed was going to give an explanation, and he got the buzz saw started half way through the man's head, but I found he stopped the demonstration, and I stop too.

RELATIVE INSUFFICIENCY OF THE PULMONARY VALVES.

Read before the Chicago Pathological Society, Feb. 8, 1897.

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I shall make no apologies for presenting to the Society the report of a case and a brief paper upon so rare a condition as insufficiency of the pulmonary valves and the rarer condition of relative insufficiency. If we would make accurate anatomic diagnoses of the commoner valvular affections, we must have some familiarity with the signs of the rare ones. I am confident that you will all agree that we should not content ourselves with the diagnosis, "heart disease," but should endeavor in all cases to make as detailed a diagnosis as possible.

Relative insufficiencies, that is, those due to enlargement of the orifices rather than to contraction of the cardiac valves, are now admitted by almost all clinicians. Those upon the two auriculo-ventricular orifices and the aortic orifices are well known and the recorded cases are very numerous.

The relative insufficiency of the pulmonary valves has received very little attention as yet, and the reported cases can be counted almost on the fingers of one hand. I believe, however, that when once the attention is directed to the subject, the cases will rapidly multiply, for many of the conditions which may in time cause a relative pulmonary insufficiency are common.

The literature of this subject may be dismissed very briefly. Cases have been reported by Stokes,[1] Kolisko,[2] Bristowe,[3] Coupland,[4] Litten,[5] Chauffard,[6] Gouget,[7] each one and supported by autopsy. Pawinski[8] in 1894 reported four cases, but only one went to autopsy some months after the diagnosis of relative insufficiency had been made, and no insufficiency of the pulmonary valves was found. Grawitz[9] reports one case unsupported by autopsy, so that his case is not above question. Chauffard's case seemed well established clinically, but at the autopsy the pulmonary valves were competent to the water test. Barie[10] in 1891 collected 58 cases of pulmonary insufficiency with 43 autopsies, and included in his list the cases of Stokes, Kolisko, Bristowe and Coupland. He evidently did not regard them as relative, for he questions the possibility of relative pulmonary insufficiency, although in a later article, 1895, he admits the possibility. The literature thus contains but six cases supported by autopsy.

Because of this very brief list we must infer much of the etiology and symptomatology by comparison with aortic and organic pulmonary insufficiency.

Because of the anatomic and functional similarity between the aortic and pulmonary valves, we are justified in the inference that conditions similar to those causing relative aortic insufficiency might cause relative pulmonary insufficiency if brought to bear upon the lesser circulation. The possible causes of relative aortic insufficiency are numerous, but they may be conveniently classified in three groups: 1, those affecting the aorta, altering its structure so that it is dilated more easily, as in acute aortitis, arterio-sclerosis; 2, those increasing the peripheral resistance, as in nephritis; 3, those dilating the left ventricle, as myocarditis.

By transferring this grouping to the pulmonary valve, we have:

1. Arterio-sclerosis of the pulmonary artery is uncommon and rarely reaches a high degree. There is no reason why it might not cause relative insufficiency of the valves.

2. This group of causes, namely, those increasing the resistance to the circulation of the blood through the pulmonary artery, is most important and includes many different diseases. Gourand[11] in 1865 drew attention to the possibility of relative pulmonary insufficiency resulting from emphysema, chronic bronchitis and indurative pulmonary processes. Coupland's case was secondary to emphysema, Bristowe's to emphysema and obliterative pleurisy. Stokes does not specify in his report as to the primary condition, but states in relation to the question that he has seen marked dilatation of the pulmonary artery in cases of emphysema.

Gouget's and Chauffard's cases were secondary to a combined mitral lesion. It is well known that these lesions cause an increase in the resistance to the pulmonary circulation, and there is no reason why the increase may not so dilate the pulmonary artery as to render the valves incompetent. The four cases reported

by Pawinski, and the one by Grawitz, were cases of mitral stenosis. From the clinical report we can not but agree with Pawinski's diagnosis, but the autopsies are wanting.

Litten's case was very different. The pulmonary artery was plugged by an embolus, an echinococcus cyst. The vessel was dilated to such a degree that the valves became incompetent.

Other diseases which might belong in this group are obliterative pleurisy, obliterative pericarditis, kyphoscoliosis, mediastinitis, aortic aneurysms and other mediastinal tumors, and all conditions which sometimes give rise to pulmonary embolism.

To these we must add the cause found in the case to be reported. When for any reason the left ventricle fails to do its work, the blood may dam back into the lungs and reach such a tension as to cause relative insufficiency of the pulmonary valves. This adds a large number of diseases, all those which can cause an increase in the resistance in the systemic vessels.

3. The third and last group, those affecting the myocardium, could as well cause relative pulmonary insufficiency as it does other relative insufficiencies.

The physical signs of relative pulmonary insufficiency do not differ essentially from those of an organic insufficiency. There is a varying degree of cyanosis, but often far less than one might expect. Sometimes there is a visible systolic pulsation in the second left intercostal space, and this may be so marked as to suggest a thoracic aneurysm. Over this same area there is often a palpable thrill, systolic or diastolic, or both. On deep palpation below the ensiform we can sometimes make out a diastolic thrill in the right ventricle.

Percussion shows that the cardiac dulness is increased to a varying degree to the right. The left borders of the heart are normal or nearly so, unless changed by some complicating condition. The dilated pulmonary artery often gives a retrosternal dulness extending to the left second intercostal space.

Auscultation shows a diastolic murmur loudest in the second left intercostal space, propagated down the sternum and outward toward the left clavicle and usually not audible over the auscultation point of the aorta. According to Bernhardt, the murmur is loudest during expiration. The murmur is quite similar to that heard in cases of aortic insufficiency, but is not propagated into the vessels of the neck. Its point of maximum intensity is not peculiar to it, for the murmur of aortic insufficiency is frequently loudest in the second left interspace. It is often accompanied by a systolic murmur, just as the diastolic murmur of aortic insufficiency is.

Friedreich in 1867 stated that there could be no doubt but that the same vascular phenomena occurred in the pulmonary circulation with insufficiency of the pulmonary semilunars, that occur in the systemic vessels in aortic insufficiency. These vessels, although removed from direct observation, still give rise to certain signs described by Gerhardt.[12] Gerhardt[13] found that a manometer connected with the nose gave a tracing of the pulsation of the pulmonary artery. The tracing taken from a case of pulmonary insufficiency differed very greatly from those taken in the normal individual and in cases of aortic insufficiency, being higher and steeper and resembling the pulse tracing of aortic insufficiency.

Although we can not apply the stethoscope directly to the pulmonary artery, we still find traces of auscultatory phenomena similar to those of the peripheral vessels in aortic insufficiency. Gerhardt found in five cases of pulmonary insufficiency two dull tones audible over the entire chest and similar to those heard over the brachial artery in cases of aortic insufficiency. Similar tones are heard over the normal chest close to the heart, but not at a point so remote as the outer border of the right scapula. Wide diffusion of these tones is not, however, peculiar to pulmonary insufficiency, for they are found also in well-marked cases of mitral insufficiency, where they arise in the pulmonary vein, and in cases of aortic insufficiency, where they arise on the aorta.

Pulsation of the pulmonary capillaries occurs just as it does in the peripheral capillaries in aortic insufficiency. Systolic intensification of the vesicular murmur during slow and deep inspiration in the portion of the chest near the heart has been known for a long time, but this phenomenon, called by Gerhardt an "audible capillary pulse" over remote portions of the chest, occurs only with the pulmonary insufficiency when the capillary pulse is derived from the pulmonary artery, with cases of mitral insufficiency when the capillary pulse is due to a retrograde wave of blood through the pulmonary vein, and in cases of aortic insufficiency when it is exactly comparable to the capillary pulse in the systemic vessels.

The second pulmonary tone may be present or absent.

These, briefly, are the physical signs in cases of relative pulmonary insufficiency. We will find in addition the signs of the primary condition.

The following is a brief clinical and postmortem report of a case, seen in Dr. Herrick's ward of the County Hospital:

German laborer, 42 years old, single and with negative family and personal history, except for an attack of gonorrhea seven years ago. Never had rheumatism or any other illness. About two years ago ran four miles without special inconvenience, but the next day spat blood, and had palpitation of the heart for several days. About one year ago had an attack of weakness and shortness of breath. Present illness began some days ago with dyspnea, headache, vomiting, cough, precordial pain and edema of feet and legs.

Examination showed a well-nourished man, face flushed and slightly cyanotic, moderate dyspnea, edema; veins of the neck prominent, showing a negative pulsation, and at no time did they show the positive pulse characteristic of tricuspid insufficiency. Temperature normal. Pulse slow until just before death. Small amount of fluid in chest, later increasing to such an amount that the chest was aspirated, drawing off a pint and a half of serous fluid of specific gravity of 1009, and containing few red blood corpuscles. Chest and lungs otherwise negative.

Heart: Apex beat in sixth interspace in the anterior axillary line. Deep cardiac dulness to second rib above, and one and one-half inches to right of sternum and to the apex beat. Palpation showed over the apex a systolic and presystolic thrill. The pulse had the characteristics of the pulse of aortic insufficiency well marked; capillary pulse distinct. Auscultation at the apex showed systolic, diastolic and presystolic murmurs. At the base two diastolic murmurs resembling the murmur of aortic insufficiency, that is, soft, long drawn and blowing. One of these murmurs was transmitted downward from the aortic area toward the apex; the other downward along the sternum. The second pulmonary tone was wanting, as was also the second aortic.

The liver was enlarged from passive congestion.

The urine scanty, of high specific gravity, albumin with granular and hyaline casts.

The interpretation of the cardiac findings was not entirely simple. The shape and size of the cardiac dulness indicated an enlargement of both ventricles. The character of the pulse and the diastolic murmur at the base satisfactorily demonstrated an aortic insuf-

ficiency, which accounted for the enlarged left ventricle.

The enlarged right ventricle was referred to a mitral lesion, either double or single. Relying mainly upon the presystolic thrill at the apex, the lesion was thought to be a combined mitral insufficiency and stenosis. Had there been only the presystolic murmur at the apex, it would have been interpreted as the presystolic murmur described by Flint in cases of aortic insufficiency. I have since learned that Schwalbe has found a presystolic thrill at the apex in a number of cases of aortic insufficiency without any accompanying mitral stenosis.

We had yet to account for the second diastolic murmur at the base, transmitted down the sternum, and for the absence of the second pulmonary tone, which, if there was a mitral lesion, should have been accentuated. Both of these could be easily explained by the supposition of a pulmonary insufficiency. This supposition was strengthened and confirmed when, after a few days' treatment, this murmur disappeared and the second pulmonary tone reappeared. The improvement was but temporary and the pulmonary tone was again replaced by a murmur.

The clinical diagnosis was aortic insufficiency, mitral stenosis and insufficiency, relative pulmonary insufficiency, parenchymatous nephritis, hydrothorax and passive congestion of liver.

After being in the ward a few weeks the patient died, and an autopsy was held four days after death.

The heart unopened weighed 1040 grams. Walls of both ventricles thickened, left ventricle 2 centimeters, right ventricle 1 centimeter. Aortic semilunars thickened, not more than two-thirds the normal size and incompetent to the water test. Pulmonary valves unchanged in structure, but are incompetent to the water test. Mitral valves thickened at the base, many vegetations. Orifice admits six fingers. Myocardium soft and friable, with scar in the interventricular septum. Tricuspid negative. Aorta shows atheromatous plaques. Liver of passive congestion. Kidney of parenchymatous nephritis.

Postmortem diagnosis: Hypertrophy and dilatation of the heart; aortic, pulmonary and mitral insufficiency, fatty and congested liver, parenchymatous nephritis.

The autopsy showed first that there was no mitral stenosis, so that our inference of mitral stenosis from the presence of the presystolic thrill at the apex was not warranted.

It is much to be regretted that the pulmonary orifice was not measured. The normal, according to Rauhing, being 67 millimeters in the male, measured in fifteen cases, and 63 millimeters in the female, measured in sixteen cases. Peacock's figures vary from these, being 90 mm. in the male, measured in sixteen cases, and 88 mm. in the female, measured in thirteen cases.

The water test as applied to the pulmonary valves is much more reliable than when applied to the aortic valves, for there are no coronary arteries through which the water may escape, and the difference between the blood pressure under which the valves close during life and the pressure of the water test is not so great as with the aortic valves.

From this case and the others so far reported, we must conclude that relative insufficiency of the pulmonary semilunar valves is possible, and inasmuch as the primary diseases which may cause this lesion are common, we are justified in believing that this condition is not so rare as so far supposed.

1 Stokes: Diseases of the Heart and Aorta, Case xx.
2 Kolisko: Zeitschrift d. K. K. Gesell. d. Aerzte zu Wien, 1859, xv.
3 Bristowe: Trans. Path. Soc. London.
4 Coupland: Trans. Path. Soc. London, 1875, 26.
5 Litten: Charité Annalen, 1878, ii, 182.
6 Chauffard: Rev. gen. d. clin. et d. Therap., 1895, 2, 321.
7 Gouget: Rev. d. med., 1895, xv, 768.
8 Pawinski: Arch. klin. Med., 1894, 52.
9 Grawitz: Zeitschrift klin. Med, 1893, 23.
10 Barié: Arch. gen. d. med., 1891, 27 and 28.
11 Gourand: Paris Thesis, 1865.
12 Gerhardt: Congr. Intern. Med., xi.
13 Gerhardt: Charité Annalen, 1892, 17, 255.
14 Schwalbe: Virchow's Arch., 1890, 119: Deut. Arch. klin. Med., Volumes xliv and xlv.

ON THE PRODUCTION OF HYDROCHLORIC ACID IN THE GLANDS OF THE STOMACH.

BY J. A. WESENER, PH.C., M.D.
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PRELIMINARY COMMUNICATION.

In *Medicine* of November, 1895, I showed that hydrochloric acid is secreted by the mucous membrane of the stomach and not formed by chemic action on the food products or fermentation. In these experiments I found a nearly constant relationship in the percentage of acid produced after each stimulation. Since then I have performed the same experiments upon three cases of chronic gastritis. In these cases free hydrochloric acid could never be detected with Boa's reagent, but upon quantitative determination of total chlorin before and after evaporation of stomach contents a difference of chlorin was found which gave about the same per cent. of volatile chlorid as was found in the cases of normal stomach, where free hydrochloric was always present.

This decomposition of chlorid was not syntonin, as the experiments were performed upon empty stomachs. This led me to believe that I was dealing with a very unstable organic chlorid, which when evaporated to dryness volatilized the same as free hydrochloric acid, but would not give Boa's test. On the strength of this observation I performed the following experiment:

1. Pure nucleinic acid was obtained from three dozen thymus glands of sheep.

2. A syntonin solution was prepared; this contained .2 per cent. of egg albumin and .1 per cent. of hydrochloric acid; the acid was all taken up by the albumin.

Then before proceeding, the nucleinic acid solution and syntonin were tested for free hydrochloric acid with Boa's reagent, to be absolutely certain that it was absent. To 5 c.c. of syntonin a saturated aqueous solution of nucleinic acid was added as long as a precipitate was formed. (The precipitate is a nuclein proteid.) This precipitate was filtered out and the filtrate tested for free hydrochloric acid. Boa's reagent gave a positive reaction. The experiment was repeated several times, the results always the same.

On making a quantitative estimation of the chlorin, in the syntonin and after precipitation with nucleinic acid, it was found that all the combined chlorin had been discharged as free hydrochloric acid.

About this time I had the good fortune of seeing a case at the laboratory which I must report as it will be the keynote of my theory, which I will state in the conclusion. The patient was a man who has suffered from chronic gastritis for several years. The first examination of the stomach contents gave the following: Reaction alkalin, free hydrochloric acid absent,

mucus abundant. He was given hydrochloric acid; three weeks later another examination was made. Reaction slightly alkalin, Boa's and Günzburg's reagent gave a reaction for hydrochloric acid. The red color which was produced was not as sharply defined as when free hydrochloric acid is present, but more of a diffuse red; furthermore, the reaction did not take place until the last drop was evaporated, whereas when the acid is present in a free condition, the color shows very soon after the heating is commenced. A quantitative determination of chlorin before and after evaporating the stomach contents, showed that a loss of chlorin always took place. From these facts I feel justified in saying that hydrochloric acid is never present in a free state in the glands of the stomach but always in combination with a proteid, and when this body is thrown off from the glands a decomposition takes place, giving free hydrochloric acid and a proteid.

The reason I have for this statement is:

1. In the cases of chronic gastritis that I have examined, there is a very unstable proteid chlorid (which is not syntonin), which when tested for free hydrochloric acid is negative, but when estimated quantitatively acts just like free hydrochloric acid.

2. I have shown what a powerful affinity nucleinic acid has for albumin and that when chlorin is in combination it is discharged as free hydrochloric acid.

3. In the one case of chronic gastritis a reaction was had for free hydrochloric acid, although the reaction of the fluid was alkalin to litmus, phenolphthalein and lacmoid. The acid could not have been there in the free state but must have been there in a proteid combination, which when heated very gently decomposed giving free hydrochloric acid.

4. That the nucleus of the cells in the glands of the stomach take up the chlorids from the blood and combines them with the pepsinogen and rennet zymogen; this combination remains intact in the glands, but when discharged decomposes into free hydrochloric acid, pepsinogen and rennet zymogen. The acid thus liberated first acts upon the albumins to form syntonin and then acts upon the zymogens and liberates them into an active state. I believe this assertion is correct for the reason that pepsin and rennet are very closely related to nucleinic acid.

FISH SLIME DISEASE.

Read before the Cape May County (N. J.) Medical Society.

BY EUGENE WAY, M.D.

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The title of my paper is the name applied by the laity to a disease, which, owing to the location of our county and the occupation of a large number of its inhabitants, is frequently met with by the members of this Society, and undoubtedly by all physicians living near the seashore, but of which little or nothing has been written or published in our text-books.

The disease consists essentially of septicemic inflammation due to the entrance into the blood through the lymphatic system of the slimy exudation covering the fish of our bays and ocean.

The class of persons most liable to this disease are the hardy fishermen who follow the sea for a livlihood, and so well is the disease and its cause known to them that they have named it as above.

The poison causing this disease, in the majority of cases, enters the system through an abrasion on the hands, usually caused by a puncture made by the fins of the fish.

The symptoms vary in degree according to the amount of poison entering the system.

In some cases there is only a slight swelling and redness at point of injury, or a small nodule forms which is annoying for a few days. In other cases painful abscesses form which are slow in healing, the patient, however, being able to go about but unable to follow his vocation.

In the severest type of cases met with there is after two or three days of general languor, a well-marked chill followed by fever and sweating. The point of injury becomes swollen, red and very sore and develops into a deep-seated abscess, the pain from which is excruciating and agonizing in the extreme. The chill or a chilly sensation recurs daily and fever becomes continuous, accompanied by vomiting and great muscular weakness, sometimes attended by delirium. The tongue becomes heavily coated and the skin usually sallow.

These symptoms continue with greater or less severity until the formation of pus, which occurs in from four to eight days, when they ameliorate, leaving the patient exhausted and often anemic. Secondary abscesses often form in the axilla, and congestion of lungs a not unusual and dangerous complication.

The prognosis is favorable as the disease is seldom seen except in fishermen, who are of necessity a hardy and robust set of men, but would in more delicate persons undoubtedly show a small percentage of deaths.

The treatment consists of removing the exciting cause of the disease, relieving pain and keeping up the strength of the patient.

The prophylaxis, which can seldom be applied, consists in at once washing the abraded or injured surface with fresh water and an antiseptic solution.

Purgatives at the beginning of the disease are a necessity in most cases and calomel in small doses is usually indicated during its continuance.

The strength of the patient must be kept up by quinin and iron and opiates freely administered.

When suppuration is established tincture cinchona comp., aromatic sulphuric acid and stimulants are to be freely given.

The abscesses which form must receive careful attention, early and free incision made and the position of the parts so arranged to favor the escape of the secretions.

Poultices must be freely used until the discharge of pus has nearly ceased, when carbolized cosmolin or an ointment composed of hg. cum creta two parts, cosmolin eight parts, should be applied.

Perfect cleanliness must be insisted upon and disinfectants such as acetanilid, creolin, carbolic acid or corrosive sublimate, unsparingly used throughout the disease.

Medical Caprice.—A prominent physician of India recently died from the bite inflicted by one of the deadliest of snakes; he had been making experiments with a view to the discovery of an antidote, and supposed he had rendered himself proof against the venom of snakes. One of the worst victims of rheumatism we ever knew was a man who had discovered a positive cure for that disease. The secretary of a notorious Cincinnati consumption-cure company died of tuberculosis. The former proprietor of the Lydia Somebody's great female nostrum is in her grave dead from the very diseases that her successors are indecently advertising against in the poorer class of daily papers.—*Massachusetts Medical Journal.*

SERUM THERAPY WITH REPORT OF CASES.

Read before the Tri-State Medical Society, St. Louis, Mo., April 7, 1897.

BY JOHN M. ALLEN, A.M., M.D.

PROFESSOR OF PRINCIPLES AND PRACTICE OF MEDICINE IN THE UNIVERSITY MEDICAL COLLEGE, KANSAS CITY, MO.

The announcement of the subject matter of my paper carries with it the idea that I would cover the field of serum therapy, but I shall confine myself to the use of antitoxic serum and its effects in diphtheria and phthisis pulmonalis.

The curative effects of antitoxic serum in diphtheria is now so well established that there is no need of argument or detail report of cases to establish its benefits in this disease to the medical profession. Hence I give only a summary of my cases. I have treated fifty-three cases of diphtheria without the loss by death of a single case. Forty of these cases were treated with serum only, cleanliness and good food. The remainder had had other treatment before I saw them. The complications which occured among these cases were as follows: Hoarseness, seven; five of aphonia; two of toxemia; one of broncho-pneumonia resulting from the extention of the membrane into the bronchi; one case of paralysis. No operative interference was needed. In none of these cases of complication did I see them before the third day. All of the cases which I saw within the first twenty-four hours recovered without complication. Hence it is my opinion that cases seen thus early rarely have any complications.

My mode of administering the serum is to begin with a full dose the first day; two-thirds the next day; one-half the next day in mild cases. If the case is of malignant variety, I repeat full doses of serum every ten hours until improvement begins. Then lessen the dose, and give from two to four more. This repeated administration of the serum is based on the fact that the bacilli may be found in the fauces for several weeks after the membrane is thrown off.

It does occasionally happen that the larynx has been attacked a week or ten days after the membrane disappears from the fauces. But where the remedy is continued as directed above, the bacilli are either destroyed or are so attenuated as to lose their vital energy. It is my opinion that the serum has immunizing properties, because I injected it into seven children who were dangerously exposed to the disease. None of them had it. The dose used was full size.

I have treated four cases of phthisis pulmonalis with Paquin's antitoxic tuberculosis serum.

Case 1.—June 1894, Mrs. D., age 32, mother of one child, presented herself for treatment and I found her in the following condition: Hereditary tendency to phthisis, had gradually lost flesh and strength until reduced from 115 pounds to 75 pounds, in a period of about twelve months. Severe cough and expectoration for about last seven menths. Sputum had been examined about four months before I saw her and found to contain bacilli tuberculosis. At the time of my first visit she stated that she had had hectic fever and colliquative sweats daily for some time. Temperature 103.5, respiration 37, pulse 98. Entire loss of appetite. Sputum under microscopic examination found to contain large quantity of bacilli. Auscultation and percussion located two spots in upper portion of right lung that were impervious to air. There was no evidence that the tissues had broken down.

I began the treatment with Paquin's antitoxic tuberculosis serum, giving ten drops by hypodermic injection, increasing the dose within three days to a dram, which was continued daily for 120 days. After which for another 120 days it was given every other day. After this it was given three or four times a week for the remainder of the year. This treatment was supplemented by the following prescriptions:

R. Creosote	xxiv gtt.	1	30
Tr. cinnamom	ʒiv	16	00
Glycerin	ʒxx	80	00

Sig. Teaspoonful gradually increased to five teaspoonful three times daily before eating.

R. Oil eucalyptus	ʒi	4	00
Oil cassia	ʒi	4	00
Creosote	ʒi	4	00
Oil tar	ʒi	4	00
Liq. vaselin q.s.	ʒiv	128	00

Sig. Inhale in nebulizer frequently.

By the end of the third week her appetite began to return, hectic fever ceased, cough and expectoration gradually ceased and in less than six months she weighed 120 pounds. From the end of the third month the bacilli began to be attenuated and continued to decrease in size and number until the end of the fifteenth month when none could be found in the sputum nor has there been any since. The points of dulness in the lungs have greatly decreased in size, but have not entirely disappeared.

Case 2.—July 1895. Unmarried lady, age 26; hereditary tendency to phthisis. Had been an invalid for five years, visiting many climates in search of health. When presented to me I found her in the following conditions. Extreme emaciation, loss of appetite, hectic fever, chronic diarrhea for the last fifteen months; pulse 110, evening temperature 103.5, respirations 45; auscultation and percussion revealed a large abscess in apex of right lung. Mouth covered with aphthæ. Sputum loaded with bacilli. My prognosis was that she would not live sixty days. She was placed on the same course of treatment as Case 1. At the end of four weeks hectic fever had ceased. Her appetite had returned. Diarrhea very much better and entirely ceased before the sixth week. She steadily improved until the end of the fifth month, when a thrombus formed in the left femoral vein from which she died thirty days later.

Case 3.—December, 1895. There had existed for five years a tubercular deposit in the apex of the right lung. Childbirth caused it to rapidly break down. Microscopic examination showed tubercular bacilli. Began treatment and continued irregularly two months. This case was refractory to treatment from the beginning; therefore was not benefited and died at the end of five months.

Case 4.—March, 1896. Male, age 22, of good proportions. Had hemorrhages several times during the preceding year. Progressive emaciation; weight 130 pounds, appetite not good. Evening temperature 101.5; respiration 34. Auscultation and percussion indicated tubercular deposits at two points of upper right lung. Microscopic examination of sputum showed an abundance of bacilli. Began treatment as above and within three weeks patient began to improve, which continued without interruption until he was compelled to leave me, September, 1896. At this time temperature normal, respirations 22, weight 150, appetite good. Sputum contained attenuated bacilli. When last heard from he was at work on a ranch in Colorado.

In an analysis of the above cases it is fair to conclude that if this treatment was begun before the structures began to break down, it would be certainly beneficial and possibly curative. After abcesses have formed it is beneficial but probably not curative. Yet if the disease is not too far advanced in the second stage, many could be cured if supplemented by climate influences.

In estimating the curative value of the remedies used, the inhalation of germicidal remedies is certainly in the right direction; but alone they are useless. The creosote has for years had some reputation as a cure for phthisis. That it is beneficial, there is no question; but it is not curative, for the reason that it practically has no effect on the bacilli. This I have many times demonstrated by microscopic inspection of sputa in patients in my clinic at the University

Medical College of Kansas City, who had taken large quantities of it. Creosote is beneficial in two ways. 1. It reduces the toxins in the blood, thereby lessening or preventing hectic fevers and colliquative sweats. 2. In a very large percentage of cases of phthisis pulmonalis next to the lungs the most frequent structure involved is the duodenum with chronic inflammation and ulceration. This interrupts intestinal digestion and assimilation, also often by reflex irritation interrupts stomach digestion. Hence is the progressive emaciation in phthisis. Creosote stands at the head of the list as a curative remedy in this pathologic condition, thereby increasing the digestive and assimilative force of the person.

With these facts before me I must conclude that the active force in affecting the bacilli was the serum. The next question is as to the effects of the serum after entering the blood. On this point many theories have been advanced.

I abstract the following from an address delivered by Dr. William Carter, of Philadelphia, before the Pan-American Medical Congress, 1893. "That blood serum is a powerful and active therapeutic force is just now beginning to be recognized. Landois discovered more than twenty years ago that the mixing of the blood of different animals resulted in the destruction of red corpuscles." Recently Dr. Carter by experiment has established the globucidal property of blood serum beyond question. He has further demonstrated that the serum of some animals are destructive to the life of others. Mettal and Buckner have shown that the blood serum of certain animals which are refractive to certain diseases is highly destructive to the bacteria that caused the disease. This shows that there are other forces in the blood which are destructive to bacteria, besides that of Metchnikoff's theory of phagocytosis. It is also well established that animals naturally susceptible to certain diseases can be immuned to those diseases by injection of the blood serum of animals either naturally immune or rendered so artificially. That the injection of blood serum of immune animals after infection has taken place will destroy it and terminate this disease is true.

That serum has globucidal and germicidal properties is well established. Its globucidol effects can be well understood, but whether its germicidal effect be by actual contact or by destroying the entity upon which the germ lives and develops is doubtful.

In view of the fact that the life and development of the germ depends as much on its environments as that of the human family, and further that its life and development ceases as soon as the pabulum upon which it lives is consumed or destroyed, we deduct the idea that serum destroys this pabulum, thereby terminating the life of the germ. This is proven by the natural history of all the contagious diseases, first by their being self-limited, secondly by the fact that one attack in the majority of them immunes against a second, no matter how badly we may be exposed to the contagion. Indeed inoculation will not produce the disease. For no other reason than the entity upon which the germ lives and develops has been eradicated by previous attack. When serum is injected into the blood to immunize the person, it is done before there exists any germs in the blood; therefore, not for its germicidal effect. The only phenomena observed is a slight reaction attended with elevation of temperature. Hence immunity is nothing more than the eradication of this entity upon which this germ lives and develops. I give as an example, smallpox. After the person has been immuned from the disease no difference can be detected by the microscope or otherwise between the immune person from smallpox and the one who has not been. The blood, the secretion and exhalation are exactly alike. I think this holds good in all germ contagious diseases. We see this exemplified in the following process of fermentation, acetous, venous, alcoholic. The bacterial ferment lives and develops as long as the fluid element contains the essentials necessary for its life, after which it dies and no further germ life can exist in this fluid. The same is true of all culture media.

Hence it is my opinion that the curative effect of serum is indirectly germicidal by destroying an entity, which is necessary for the life and development of the bacilli. This is manifested in the fact that after its use the bacilli becomes attenuated; and from the further fact that many of us do not possess this entity. Hence the bacilli can not develop in our structures.

A FEW NOTES ON SQUINT.

BY WILLIAM B. MEANY, M.D.
ST. LOUIS, MO.

It has long been known that hyperopes easily become the victims of exaggerated strabismus constituting squint; the disturbance between the two functions—accommodation and convergence—leading to this result. The accommodation is measured and recorded by the Nagels plan of metric angles—a plan which corresponds with the metric measurement of the accommodation.

An emmetrope looking at an object half a meter away would use two diopters of accommodation; he would at the same time converge to the same point, and thus convergence would be expressed by two meter angles, so that we record it thus: A = 2 D; C = 2 m a. If the object looked at be 20 cm. off, then: A = 5 D; C = 5 m a. The position of the p. p. (near point) and the p. r. (far point) of accommodation vary according as the patient is emmetropic, hyperopic or myopic; and in all, the p. p. and p. r. of convergence is much the same, whatever the state of refraction may be, and the amplitude of convergence is not reduced by advanced age.

The foregoing remarks show how much latitude must be allowed when considering the connection between the linked functions of accommodation and convergence. Therefore the hyperope for a given amount of convergence will have to call into play an amount of accommodation in excess of his convergence equal to the amount of his hyperopia. Now if accommodation does not exceed the positive part of his range of accommodation, he will be able to see clearly; this is the case in the lower degrees of hypermetropia, but in the higher degrees it will be impossible to harmonize these two functions which preside over binocular distinct vision. The amount of accommodation necessary for clear vision calls into action a greater amount of convergence than can be used for that particular distance, and convergent strabismus is the result.

I am aware that in thus considering the connection between accommodation and convergence, one is assuming that binocular fixation is a faculty which exists from birth, and not (as it might be considered) an acquired habit.

A hypermetrope therefore may find himself in this predicament—either he can see binocularly but indistinctly, or he sees distinctly with a loss of binocular vision. If the production of squint be due to a want of harmony between the two functions of accommodation and convergence, how is it that while some hypermetropes become the victims of strabismus, and others do not?

This is a question which it has always been difficult to answer satisfactorily, as much so now as in the past; the most probable explanation is that when one eye is inferior to the other in point of vision, it is sacrificed for clear and distinct monocular vision; so that any slight or trivial complaint—ulcers or nebulæ—or even the covering up of one eye for a few days, an instance of which we have long been familiar as assisting in the development of concomitant squint. The squinting eye is often found to be amblyopic (at least 50 per cent.), and until A. D. 1880 (about) this amblyopia has been considered as the result of squint caused by suppression of the image in the squinting eye; the object of the suppression being the prevention of diplopia, which could not fail to be of great inconvenience to the patient; no evidence is forthcoming in support of this theory.

I know of no case on record in which the vision of both eyes was found good before the squint developed, one of them afterward becoming amblyopic. One is somewhat inclined to neglect taking the visual acuity of young children owing to the time taken up in endeavoring to get correct answers from them and the ease with which one can "estimate" (approximate) their refraction by other methods, such as retinoscopy or the ophthalmoscope, and by thus omitting the acuity of vision one diminishes the chances of finding cases in support or otherwise of this theory.

Is it not fair then to assume that the theory of suppression of the false image followed by amblyopia is quite acceptable as the one of congenital amblyopia.

While errors of refraction are important factors in the production of squint, has for a long time been generally agreed upon, yet the surgeon who neglects to keep strict account of the disturbed muscular functions will find the results of his attempts to correct the obliquity entirely negative.

Surgical interference for the correction of squint is a binocular proceeding and should only be resorted to after a study of each eye separately, and both as regards their reciprocal movements. A thorough consideration of the factors influencing the movements of the eye in the commencement will aid us materially in the treatment. The factors favoring convergence are, lowering of the plane of vision, fixing near objects, exercising of the accommodation; while the absence of fixation for near objects, raising the eyes, repose of accommodation by the aid of dark smoked glasses, the instillation of atropin, paralysis of accommodation, diminish convergence and favor divergence.

Every measure taken to reëstablish binocular vision facilitates the cure in a strabismic subject. If for example a convergent squint having developed at an early period of life, be operated upon without first submitting the patient to a tonic treatment; orthoptic exercises and especially the stereoscope or the use of other well-known measures to further diminish the squint, we may expect not only a return of the original trouble, but it has been the experience of the past that prediction with almost a certainty of having an over-correction often resulting in a disfiguring divergent squint, that may cause an endless amount of trouble to counteract.

By submitting a child to the therapeutic treatment as herein detailed, I have witnessed a squint of 30 degrees rapidly diminish to 15 degrees of convergence; having derived from therapeutic measures all the advantages they have furnished.

The following case may prove interesting, having been treated in the "old way."

A young man 19 years of age applied for treatment, as he stated it, for loss of sight in the right eye.

Ophthalmoscope examination reveals:

Left eye: Hyperopia total, 3.5. V = 1.

Right eye: Hyperopia total, 3.5. V = 0.

Right eye: Convergent strabismus apparent, 52 degrees.

Angle K (angle between the lens of fixation and the radius of the cornea which passes through the pupil) + 10 degrees.

Here we have a case with a total convergent strabismus of 52 + 10 = 62 degrees; an exceptionally high degree.

Fields of fixation measured with perimeter:

Left eye.		Right eye.	
External.	Internal.	Internal.	External.
32	47	47	34
Instead of normal:			
47	47	47	47

It will be readily observed that the field of fixation is strongly limited to the outer side of both eyes; binocular vision absolutely abolished. It was found impossible to provoke the union of the two stereoscopic images or the simultaneous vision of such with the stereoscope.

A tenotomy of the internal and advancement of the external recti muscles was practiced in the right eye; the internal rectus muscle was found enlarged and exceedingly strong; the external rectus weak, narrow and flattened; a slight resection of the tendon was made. Atropin having been instilled, both eyes were securely bandaged, antiseptic dressings of mercuric bichlorid, 1 to 5000, being used. Both eyes were kept bandaged until the removal of the threads on the fourth day.

The eye operated upon was again bandaged, the opposite eye was left free and provided with its correcting glass + 6D. The fifth day after the operation the bandage was removed and a + 6D provided for the right eye.

The hyperopia proved to be of six diopters in each eye. On careful examination of the eyes a slight tendency to convergence persisted; the eyes were again examined on the ninth day after the operation and, instead of a total apparent strabismus of 62 degrees as existed before the operation, it was found to be one of 10 degrees only.

With a stereoscope furnished with convex glasses of 12 diopters for each eye, the patient unites the images when they are separated by a distance of 60 millimeters. Stereoscopic exercises were ordered and to be continued daily; after several days' use of the stereoscope, the patient having learned how to observe his optical impressions, indicates (one eye being covered with a colored glass) distinctly a monocular diplopia for each eye.

The two monocular images appeared to be very near each other, separated by six or seven centimeters when the object, a flame, is placed at a distance of five meters.

Twenty-eight days after this patient was operated upon the apparent strabismus had practically disappeared; with a colored glass a distant flame though first seen in homonymous diplopia, the patient quickly unites with the two images.

The binocular vision persists up to a one-seventh m. (14 cm.), so that with hardly a month's treatment he has obtained almost normal amplitude of convergence. P C = 7 m a; R C = 0 m a; 7 A C = m a. The patient unites the stereoscopic images with a distance of 73 mm., which shows the increasing strength of the divergent power with simultaneous contraction of both external recti muscles.

Does not the foregoing history of this case illustrate that a success was possible only with a combined tenotomy of the internal and advancement of the external recti muscles, followed by orthoptic and stereoscopic exercises, as well as the correction of the existing error of refraction? I am quite sure the results would not have been the same had we dispensed with any one of the measures resorted to in the treatment.

Are the functions of the muscles of the eye of a chemical nature, or a mechanical one, or both? Is the solution to be had only in mathematical research?

There are other muscles of the body which act in concert in order to produce certain effects, those of the glottis for example, about which anatomists to this very day have held such contradictory and confused opinions. The muscles of the eye, however, are about as well understood as those of any organ of special sense.

I thought it well at this period of time to register, in a general way, some of the views on squint held by the ophthalmic surgeons in the early *eighties*, and to cite a case successfully treated in the "old way." Just where the "old methods" so radically differ from the "advanced" disquisition, as set forth by some writers of late with the suggestion of recent promulgation, we submit the foregoing observations chronicled from the period hereinbefore referred to, for your consideration.

3907 West Belle Place.

TAXIS IN INCREASED INTRA-OCULAR TENSION.

Read in the Ophthalmological Section of the Congress of American Physicians and Surgeons, May, 1897.

BY S. O. RICHEY, M.D.

WASHINGTON, D. C.

The principal arteries of the globe enter it posteriorly and pierce the sclerotic directly, limiting as far as possible resistance to the access of nutrient blood. On the other hand, the veins pass very obliquely through the sclerotic in channels varying from 1.5 mm. to 5.5 mm. in length and contain no valves distal to their junction with the ophthalmic vein. The intra-ocular vessels have no vaso-motor constrictors, and the tension of the eyeball depends upon the pressure in the extra-ocular arterial current[1]; after death it is lowered. Given an abnormal propulsive force in the extra-ocular arterial current from any cause, and the increased influx of arterial blood raises intra-ocular pressure. So long as this influx does not exceed the ability of the venous system to remove it, the increased tension is within the limits of safety; but should there be any slowing of the outflow of venous blood, that is, a loss of balance between the influx and the efflux of blood, "a vicious circle" is at once formed, which is more or less able to break itself, depending upon the less or greater violence and persistence of the general vascular excitement.

Unfortunately, from this point of view, the anatomic course through the sclerotic of the veins favors obstruction to the outflow of venous blood, they for a limited part of their length being parallel with the sclerotic and within its meshes; so that *any* increase of pressure within the eye must narrow their lumen and diminish the outflow. This in turn adds to the existing intra-ocular pressure, farther reducing the caliber of the veins, and resulting in edema of the surrounding tissues, conveying a false impression that glaucoma is due to a disturbance of intra-ocular secretions.

Venous stasis in chronic glaucoma, if not relieved, results in thrombosis and connective tissue hyperplasia, in addition to other recognized changes. The difficulties and uncertainties arising in the history and management of chronic glaucoma have their immediate cause in thrombosis of the choroidal veins, complete relief from which depends upon the length of time it has lasted, and the more or less permanency of the changes within the vessels from the presence of coagula; for organized tissue may have formed there, with final abolition of the vessels, of which no mitigation is possible.

Previous to organization of the coagula and obliteration of the vein, during stasis and even when thrombosis is recent, the flow of venous blood is favored, or the coagula may be broken up, passed into the larger vessels and re-dissolved by pressure upon the external surface of the eyeball in imitation of the normal interrupted pressure upon it of the eyelids, of the extrinsic muscles and their tendons, and that produced by the contractions of the iris, which here, as elsewhere, promotes the movement outward of the current within the veins, and is antagonistic to stasis. This proceeding[2] I suggested and described at the meeting in 1896 of the American Ophthalmological Society, under the name of *taxis*, because the movement of the fingers is the same as in reducing hernia. It is an imitation of a normal function adjusted to a condition of normal tension, and is necessary because this function of the lids and muscles requires aid in a state of high intra-ocular tension, which offers increased resistance to pressure. It should be cautiously practiced when the coats of the vessels are weak, to guard against intra-ocular hemorrhage, the risk of which is small, except when hemorrhage is imminent or has previously occurred. It will accomplish what may be achieved by operation, with the advantage that it may be repeated with the recurrence of venous stasis and increased tension, which is a chronic tendency in chronic glaucoma.

That a myotic stimulates the iris to the production of this kind of pressure; that a mydriatic favors an attack of glaucoma by paralysis of the iris, thus allowing an advance of the vitreous body and lens, and consequent increased intra-ocular engorgement and obstruction of the anterior channel of filtration; that iridectomy, the force of the extra-ocular circulation being lessened, acts by temporarily relieving pressure upon the surface of the veins, permitting them to disgorge themselves; that after iridectomy, malignant glaucoma, intra-ocular hemorrhage and failure of the anterior chamber to reform are caused by the per-

[1] Resistance of the eyeball to pressure is equal to 26 mm. Hg., and pathologically may reach 70 mm. (Norris and Oliver, System of Diseases of the Eye, Vol. i, p. 125.)

N. von Kries found arterial pressure in the capillaries of the hand when raised to be equal to 24 mm. Hg.; when the hand hung down, = 54 mm. (Physiology, Landois and Stirling, 2d Ed., p. 151.)

[2] A paper on "Massage of the Eyeball as a Therapeutic Measure in Glaucoma," by Dr. G. M. Gould, to be read at the meeting of the AMERICAN MEDICAL ASSOCIATION next month, is announced.

sistence of undue *vis a tergo* in the extra-ocular arterial system, I am convinced.

This paper is an appeal to my colleagues to transfer their attention in glaucoma from the anterior channels of filtration to the fundus; from the relative amounts of secretion and excretion of the fluids of the eye to the influence of the vascular system, local and general; from a possible vicious circle in the anterior to a more rational vicious circle in the posterior section of the eyeball; satisfied that only thus will they find an acceptable solution of the many perplexing phenomena which have been observed in glaucoma.

ASTIGMATISM.

Read to the Western Ophthalmological, Otological, Rhinological and Laryngological Association at St. Louis, April 8, 1897.

BY DUDLEY S. REYNOLDS, A.M., M.D.

Professor of Ophthalmology, Otology, and Medical Jurisprudence, in the Hospital College of Medicine, Medical Department of the Central University of Kentucky. Surgeon to the Ear and Eye Department of the Louisville City Hospital, and the Gray Street Infirmary, etc.

LOUISVILLE, KY.

This report is based upon the recorded observations of 4,686 persons, excluding as far as possible all cases of presbyopia.

I rely absolutely upon the stenopeic disc, and the test type of Snellen, illuminated always with parallel light, with the patient's accommodation completely suspended. This is the only method which I consider worthy of the confidence of either the patient or the practitioner.

Total number of cases of spherical error requiring correction	3450	
Number of cases with H. in one eye and M. in other	168	= 3282
Astigmatism H. in both eyes	380	
" H. Comp. in both eyes	254	
" H. in one eye only	232	
" H. Comp. in one eye only	185	
Mixed astigmatism in both eyes	54	
" " in one eye only	37	
Astigmatism M. in both eyes	76	
" M. Comp. in both eyes	89	
" M. in one eye only	44	
" M. Comp. in one eye only	57	
	1408	
Persons with H. Astigmatism in one eye and M. Astigmatism in the other eye	4	= 1404
Astigmatism of oblique axis	206	
" of different degree in each eye	154	
" at right angles in both eyes	167	
" in one eye only	555	
" of same degree and axis in both eyes	322	
	1404	
Total number of recorded cases		4686

It may be interesting to observe that the mydriatic used in the first 576 cases, in which there were 113 cases of astigmatism, was sulphate of atropin. In the remaining 4,110 cases, in which there were 1,291 cases of astigmatism, the mydriatic used was the hydrobromate of homatropin. The manner of employing the latter has been varied; at first I used one grain to two drams of distilled water, dropping the solution into the eyes every fifteen minutes until four applications had been made. This method proving unsatisfactory, I doubled the strength of the solution, and employed it every five minutes until four applications had been made. In a large number of experimental observations to determine just when the accommodation is suspended under this method of using the mydriatic, I concluded thirty-five minutes to be the minimum, and fifty minutes to be the maximum time required to produce complete suspension of accommodation.

In the last 2,000 cases I have employed ten instillations of the homatropin solution, in the strength of one grain to the dram of water, the instillations being one minute apart. I find that complete suspension of accommodation is almost invariably present forty-five minutes after the last instillation, and that the effects have begun to fade away at the end of an hour and a half. I have occasionally found it necessary to repeat the instillations, causing the patient to remain another half hour after the last, and in the repetition of the instillation, I deem four applications quite sufficient. I have never known a case, even in high grades of astigmatism, which would not finally succumb to the action of homatropin. I have, in twenty or thirty cases, found a third repetition of the instillation of the homatropin necessary. I use the same strength of solution, and the same mode of application in children and adults alike. I have never known constitutional disturbance to follow its use, excepting in three instances, two of these young ladies of very sensitive nervous organizations, and one a boy with phimosis.

The asthenopia has not always yielded promptly to the correction of the refraction, but in a large number of instances constitutional treatment has been necessary. Change of diet, and habits of life are most essential in nearly every case. The nature of the constitutional medication should always be determined after careful examination of the general condition of the patient. I find patients with severe asthenopia recover quicker under treatment when the use of the eyes for the purposes of study is interdicted, pending the general treatment. Most persons suffering from asthenopia, require better blood and more sleep. Unfortunately a great many have acquired drug habits.

Persons who take yeast bread, cooked fruits, and other forms of glucose, suffer necessarily from the pressure, upon the nerve trunks, of the abnormally increased volume of the lymph stream, aside from the gastric irritation which adds to the severity of the headache, induced by the over-taxed accommodation of the eye. Phenacetin and other drugs of this class, including the bromids, simply aggravate the patient's condition, and no amount of pains-taking care in the correction of the errors of refraction will relieve such cases. A great many young men whose nervous systems are disturbed by the toxic effects of tobacco, are alike troublesome to manage.

Correcting errors of refraction in the eyes relieves those cases of asthenopia found in persons of good general health only. Recovery in all other cases is contingent upon other means of relief.

SURGERY ONE HUNDRED YEARS AGO.

AN HISTORICAL STUDY

BY DR. GEORGE FISCHER.

DEDICATED TO THE GERMAN SURGICAL ASSOCIATION.

TRANSLATED FOR THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION BY CARL H. VON KLEIN, A.M., M.D.

(*Continued from page 982.*)

VII.—THE RISE OF GERMAN SURGERY UNDER AUGUST GOTTLIEB RICHTER.

Frederick II; German poets and musicians; Kant; Social relations in the second half of the century; Surgery and clinical institutions at Göttingen; The life of Aug. Gottl. Richter; Richter as a surgeon, as a writer, as a teacher, as a physician.

At the close of the Seven Years War, Prussia became one of the great powers of Europe. *Frederick the Great*, at home and abroad, was considered the greatest commander-in-chief, to whom only a few leaders of former times could be compared. Europe's

armies were amazed at his mode of warfare and tried to imitate the strategy of the German armies. As grew the belief in the invincibleness of their King, so grew the confidence of the Germans. For hundreds of years there had been no man among them who had so powerfully taken hold of their entire affairs. At last, after so many long years of profound depression and national misfortune, a star arose, to whom the Prussians could look up with pride. And that luminary was Frederick II., the only man whose popularity struck root in this prostrated nation and who evoked such worship among his people. Indefatigably active, plain and unpretending in appearance and having good common sense, he disdained pretense, mendacity and flattery, and showed great love of justice. His highest ambition was to conquer ignorance and prejudice, to enlighten mankind and ennoble its customs. Frederick II. was the practical genius of that century. Filled with great perseverance and patience, his orders proceeded from a well-considered political management; he always retained a statesman-like calmness, his infallibility and judicious reckoning. In spite of the way in which his people worshiped him, Frederick grew almost indifferent to the enthusiasm of his subjects in his advanced age; he became more silent and reserved, and at the decline of his life said that he was quite tired of governing slaves. The following is taken from one of his posthumous manuscripts: "During a king's lifetime, he is the idol of his court, the eminent sprinkle incense before him, the poets celebrate him in song, the public fear him, but little is he loved. When he is dead, the evil he has done lives after him, for the good has been interred with his bones." Thoroughly German as the King was, nevertheless the French nourishment and training he had received during the deplorable condition of German literature, were revenged by his great contempt for the golden fruits that home literary products reaped later. He absolutely ignored Lessing's "Minna von Barnhelm" and "Nathan"; he considered Goethe's "Goetz von Berlichingen" an *imitation détestable de ces abominables pièces de Shakespeare.* There can still be seen in the public library at Zürich, framed and covered by a glass, a letter written to Professor Müller on the publication of the "Nieblungenlied" by Frederick the Great, in which he says: "You have too great an opinion of these things. In my estimation, they are not worth a penny (einen Schuss Pulver), and do not deserve to be resurrected; I would not tolerate such trash in my library, but would throw it out." However, what did the genius of the German poet care whether the emperor and the kings took a personal interest in his art or not; his own strength carried him through. But Goethe thought that, with the appearance of Frederick the Great and the good results of the Seven Years War, the grand epoch in German poesy and the evolution of the national spirit began. The German became cognizant of his worth, and with this confidence of self Lessing exclaimed: Show me an abstract of the great Corneille upon which I could not improve. We can well understand the importance of these words, if we picture to ourselves the fact that the French literature entirely controlled the German mind in the first half of the century. The courts copied after Louis XIV., the aristocratic Germans took no notice of their countrymen, the poets and authors, but wrote and conversed in French, and the Parisian tailor had no less an influence on our good tastes than the Parisian Academy. Now German literature began to rid herself of her foreign adornment. A golden age of German belles-lettres, music and science dawned, without encouragement on the part of a kind Medici or a gracious prince.

It is charming to see how, simultaneously with the breaking forth of the *genius of the German poet* and the enthusiasm aroused thereby, our sciences are likewise promoted also without the good will and favor of a sovereign. Since the year 1750 new blossoms of German poesy have been developing, which, even then, breathed of national sentiment. Soon thereafter a new era in surgery also dawned, of which August Gottlieb Richter was the leader, obtaining the professorship of surgery at Göttingen in 1766. If we consider the following twenty years when Richter, in the prime of his life, wrote his most important works, we first of all come across his surgical library, which, as it were, opened a new world for the German surgeon. Daring, only on account of similar success, to compare the appearance of polite literature (belles lettres) of this epoch with the above—not judging the importance of the writers concerned—we find that Herder, by means of his studies of Homer and Shakespeare, his Oriental and Spanish literary researches, greatly enlarged the literary horizon. Richter annihilated the itinerant rupture and cataract butchers with his great works on cataracts and ruptures. This extirpation of fungi which grew so exuberantly on German soll, has a parallel in Lessing's exertions to expose the errors of the French dramatists, who beguiled the German art with the severity of Aristotelic philosophy. If there was still a point on which the poet and the surgeon agreed, it was the positive, productive reviews which both were so capable of writing. At last, Richter's principles opened the road for the progress of the science of surgery. What did the poets do during the interim (1766–1787)? Lessing, who composed "Minna von Barnhelm" during the last year of the Seven Years War, now published "Laokoön," and his dramas, "Emilia Galotti" and "Nathan." Wieland published "Mercury," "The Abderites" and "Oberon," Herder, a "Journal in Art and Science," "The Opinions of the Nations" and his "Ideas on the Theory of the History of Mankind." Then followed Goethe, the most ingenious representative of our tumultuous and oppressive period, with his great works, "Götz von Berlichingen," "Werther" and "Clavigo;" toward the latter end of this period we also find the works of the favorite poet of the Germans, Friedrich Schiller. They are: "Die Räuber," "Fiesco," "Kabale und Liebe" and "Don Carlos." An antique work on the beauty of the Greek form and style was resurrected and revived by Winkelmann, but the views obtained therefrom had to be revised for the Germans before sculpture, architecture and painting derived any benefit from it. There was a new turning-point in dramatic art when the first German National Theater was opened by the Ackermann troupe and the famous actor, Conrad Eckhof, in 1767, and when the Wiener Burgtheater was established by the Emperor Joseph II., in 1776, the sole object of which was "the improvement of good taste and ethical culture."

And the *German composer of music* furnished another step in the grand progress of the Germans. For twenty years he had not been blessed with so much talent. Gluck was the founder of a new dramatic style. After "Alceste," appeared his opera, "Iphigenie in Aulis," which was performed in Paris in

1774, with immense success, and within two years was sung 170 times, giving the older French music the death blow. Then followed his "Armida" and "Iphigenie in Tauris." At the beginning of that period, many symphonies, quartettes and sonatas of Haydn, the conductor of the Prince Esterhazy Band, and of Mozart, were known. The latter's "Idomeneus," "Entführung" (The Rape), "Figaro," which was composed in six weeks, and "Don Juan," which outshone all the others, belong to this epoch. The youth, Beethoven, was just becoming known, and his performances on the violin and piano, as well as his free fantasias, astonished the public. What an abundance of brilliant, truly patriotic works of art were showered upon Germany, as from a cornucopia filled with blessings, in the short space of twenty years following the Seven Years War, and while formerly but a single genius adorned a century, now one jostled the other.

But the sciences did not lag behind the belles lettres, but were greatly revolutionized by Frederick the Great's maxim, "Freedom of thought." The period of enlightenment in Germany began with him and Joseph II. The priest had to submit and the boldest idea gained ground over the old productions in spite of him. Ancient customs and modes of thinking became obsolete, prejudices were conquered. It was no accidental event that, in Germany at this time, the great thinker Kant "created thoughts which threatened to overthrow the entire former views of the world with wonderful boldness." In 1781 appeared his criticism on "Pure Reason." His philosophy, with which he ascertained the origin and limits of the human mind, which never permitted the entire theoretical use of our reason to extend beyond objects of practicable experience, and which discarded all old-fashioned ideas and prejudices, had a great influence on all the sciences. Those who did not wish to be behind the times had to resort to his prescribed course of free, independent research. To this guidance the German sciences owe their greatest success. History and philology took a new upward flight with Johann von Müller, Niebuhr, Schlosser and W. von Humboldt; the old classics were given new life by Heine and Wolff. Kant's ideas were also transplanted into the natural sciences (Blumenbach and Sömmering); they did not, however, make any great, wide-spread progress, because the apprehension of simplicity and plain fact was lacking.

We will here make a few remarks on the social relations in the second half of the eighteenth century. This gave itself the nickname of the "Enlightened;" from all chairs of learning and from the pulpits, in society and in the workshops of the mechanics, sounded the word "Enlightenment," and yet contemporaries talked of our "disordered period, in which sense and nonsense, wisdom and ignorance, bigotry, superstition and incredulity, enlightenment and darkness, integrity and deception cross each other" (Baldinger, 1787). This is similar to what Scherr, in our times, terms a kaleidoscopic variety of contrasts as being characteristic of the eighteenth century. General prosperity was discernible throughout the various German cities; the houses were more comfortable and more spacious and had larger windows and bright stairs; the towns were embellished with walks and gardens; the merchants and the manufacturers were now the wealthy people of the city; the wounds of the Seven Years War had healed. The government founded charitable institutions for the care of the poor and of the sick, placing physicians in charge; for the vaccination of the public in general and for the deaf and dumb, the latter the first institution of its kind established in Leipsig, in 1778, by Heinike. Among the places of amusement, which were few in number and not very expensive, the theater was the most popular. The wandering theatrical companies increased in number and the arrival of one of them was an event of great importance. In spite of the poor transportation and the few good high roads, there was more traveling done than in the middle of the century, and that oftener into the mountains, on account of the growing taste for nature's beauties. The middle class, occupying a position between the nobility and the laity, comprised the learned, the officials, clergymen, and the prominent merchants. This class, which was separated from the mass by its exemption from military services and which considered it a disgrace when their children, after having been given an education at school, fell into the hands of the recruiting officer, represented the best portion of national power. It was the training received at college that united these men and distinguished them from all others. While formerly at the Latin schools a pedantic, thoughtless method of teaching was pursued everywhere, now a knowledge of the life of the ancients and an intelligence of its embellishments were the essential factors of study. The young people had to do their own thinking. In short, a classical education was the aim of the middle-class youth. The great value of athletics for physical development became known, and we are proud to say that the same did not alone emanate from Germany (Gutsmuths, 1793), but was also greatly cherished in our Fatherland. On the other hand the interests of the government and the most important affairs of the nation were still slumbering. There were plenty of honorable men, but sentimentality prevailed instead of virility. Who does not know the touching story of Klopstock, when he with his friends was at the cemetery and at the sight of the roses, the flowers of love, in contrast to the grave, became so agitated that they bought a bottle of wine and caroused at the cemetery in accord with the roses and graves. We have mentioned heretofore how Voss and his friends formed the "Göttinger Hainbund," a society of young poets who vowed their friendship under the sacred trees of the "Hain," increasing the sentimental feeling to the utmost degree. When Gœthe's "Werther" appeared the tears flowed in torrents; à la Werther became the favorite habit of sentimental gentlemen, and Schiller's "Lotte" was the most famous type of woman of that period. On account of the dearth of political interest, there grew an uncomfortable condition of frankness among the educated. While the Revolution was going on in France, the muse was calmly being cultivated in Germany, revelling in her two greatest poets. Louis XVI. and Marie Antoinette beheaded in France, while "Reinecke Fuchs" was being composed in Germany; Robespierre's Reign of Terror and the "Letters on Æsthetic Culture of Man;" the battles at Lodi and Arcole at the time of the writing of Wilhelm Meister, Horen and Xenien; Belgium sided with the French, "Hermann and Dorothea" were being written in Germany; Switzerland and the Ecclesiastical States (Papal territory) were French, while "Wallenstein" materialized in German; the left bank of the Rhine belonged to the French,

her natural daughter though, the "Maid of Orleans," was being composed across the border; Hanover was occupied by the French, when "Braut von Messina" was being written in German; Napoleon was crowned Emperor when the work "Wilhelm Tell" saw its first light. The ten years during which Schiller and Gœthe, bound by the tender ties of friendship, lived together, the ten great years of German literature, were the same years that France suffered from her Reign of Terror (G. Freitag). To adorn oneself with the finery of others for a short time results in an uncomfortable feeling, even if this little loan of remarks on historical culture are pardonable on the part of the surgeon. We will therefore return to our sciences.

The predecessors of A. G. Richter were at *Göttingen*, the objective point of activity. Soon after the founding of the famous "Lein Athen" by George II., the very learned body physician of the Bishop of Lübeck and afterward of the King of Sweden, George Gottlob Richter, was appointed head salaried professor of medicine, and A. von Haller second professor of anatomy, botany and surgery by Werlhof in 1736. Haller's achievements for science at Göttingen were extraordinary. In 1738 he founded the anatomy amphitheater, a botanical garden the following year and in 1750 a maternity hospital. He also established a museum of anatomic collections and a school for artists whose specialty was plants and animals. His purpose to erect a clinic failed, for these institutions were not thought necessary until after van Swieten's successes in Austria. In 1745 he founded a scientific journal which, edited by him in a most skilful manner was, next to the Jena literary journal for scientific contributions, the most important collections in Germany. Richter carefully looked over all matter handed in for his journal, willingly accepted knowledge from foreign nations and always used a simple style of expression. After he had constructed a plan for the formation of a royal society of sciences in Göttingen, the same was organized in 1751 and attained great renown under his superintendence as its life-long president. Haller had put aside poesy as his influence in that direction amounted to nothing. No periodical publication on poetry could succeed by the side of the scientific journal. During the ten years after the appointment of the above men, two other professors were added to the medical faculty: Segner, who taught natural philosophy and mathematics, and Brendel. Somewhere about the year 1750, when Haller went back home and Segner moved to Halle, Röderer was given charge of the anatomy amphitheater and the maternity hospital while G. Zinn taught botany, but at the same time carried on anatomy. In the following ten years beginning with 1760, when the old professors, with the exception of G. G. Richter, had passed away or accepted positions outside of Göttingen, four additional salaried professors were appointed: R. A. Vogel for chemistry, mineralogy, pathology, semiology and materia medica; Ph. Schröder, summoned from Marburg, obtained the third position in the faculty and read on general therapy to the students; Büttner taught therapy and botany; the fourth, Matthiä, who, tutored by Heister, occupied his time principally with historical works, wrote on Hippocrates and Quintilian, but translated also more modern writings (Winslow's Anatomic Treatise on the construction of the Human Body, Garengeot's Treatise on Surgical Operations, le Dran's Manual on the Extraction of Stones from the Bladder). Three extra (unsalaried) professsors, who taught during this period were: Murray, having charge of the botany, Wrisberg of the anatomy, and A. G. Richter, surgery. The professors had a great habit at that time of meddling with all the branches possible in teaching, A. Wrisberg, for instance, using certain manuals in his lectures. He taught anatomy and physiology according to Haller's manual, obstetrics according to Roederer's principles, legal medicine according to Ludwig, surgery according to Heister and Ludwig, ophthalmology according St. Yves and osteology according to Böhmer's manual. In 1773 Baldinger arrived in Göttingen to teach general pathology and the natural sciences, but remained here only until 1782. During the time from 1780–90 there were besides Murray, Wrisberg and A. G. Richter four more salaried professors: Peter Frank, of pathology; Gmelin, of chemistry, pharmacy and mineralogy; Blumenbach, of physiology, comparative anatomy and natural history; V. Stromeyer, of general therapy and materia medica. The unsalaried Professor Fischer had charge of the maternity hospital, and Arnemann delivered surgical lectures. Some of the later professors with date of appointment were: 1792, the obstetrician Osiander; 1800, Wardenburg; 1803, Himly of Jena, as director of the hospitals and in 1804 C. M. Langenbeck was appointed unsalaried professor of anatomy and surgery.

But what was the *condition of surgery* and what *were the clinical facilities at Göttingen?* The auspices under which practical surgery began in Göttingen were poor: A. v. Haller accomplished nothing during the seventeen years he was employed here. About the year 1765 the following lectures on surgery were given by three of the professors: The first one by G. G. Richter, who read Boerhaave, the second by Vogel, who taught according to Heister's little "Surgery" and performed operations on cadavers alone, and the third one by Wrisberg, who taught Haller, Heister and Ludwig, as mentioned heretofore. The students were now and then given opportunities to accompany their teachers on their visits to the sick and in 1764 Vogel founded a sort of ambulatory clinic (collegium clinicum) where the sick of the poor people in the city and from the country came. Vogel's students accompanied him to his patients' bedsides, and Saturdays they took little trips with him into the country visiting the more important cases. The students kept a notebook on the patients referred to them and for defraying the expense of the medicines they made a contribution out of their own pockets every quarter year. When patients needed surgical attendance the university surgeon, Tolle, was summoned, who had then to follow Vogel's instructions. Since the year 1750, the surgeons of Göttingen have been united in a secret corporation and one of the professors was appointed over them as Praeses Collegii Chirurgici; this position was held respectively by Haller, Roederer, Schroeder and A. G. Richter, in the order named. Not until 1780 a hospital with fifteen beds for medical and surgical cases was founded. The idea was suggested by the Free Mason's Lodge, which made yearly contributions for its support, but from the very beginning the government furnished the greatest share. The patients received their hospital garb, board and medicines gratuitously; only for the wealthier sick a few rooms were reserved. A. G. Richter was appointed superintendent and

granted the right to use his discretion in admitting the most important of those sick who applied. Two hours of his afternoons were spent in visiting, and in attending the necessary operations. Some of his assistants were: Dr. Böhmer, Professor Stromeyer, who also gave clinical directions in the hospital, and later Wardenburg and Himly. The help consisted of one male and one female nurse and one servant. Every month the Göttingen surgeons took turns in performing the operations for nothing, and their pupils were admitted as free spectators. Students who attended the daily visits paid reasonable fees for the same and were allowed to perform operations. Theological students also practiced there, but aside from this, there was religious services on Sunday and on holidays. From the time of the opening of the hospital in May, 1781, up to December, 1787, 667 patients were enrolled.

About the period of 1788–90 several alterations were made in the clinical institutions. Vogel's ambulatorium was changed to a endowed public Clinical Institute under Baldinger (1773) and afterward successively superintended by Frank, Fischer and Osiander. The number of cases treated at the ambulatorium, about 500 yearly, corresponded to the small number of inhabitants at Göttingen. The "Chirurgische- und Krankenhospital" also underwent a change. When, in 1793, all the secret societies, consequently also the Free Mason's Lodge, were dissolved, the latter presented the establishment and 5,000 thalers to the government, which from that time on maintained the same alone. It remained under the direct supervision of A. G. Ricter until 1797. Two years later two of the sixteen beds were given in charge of Professor Arnemann, while the rest were equally divided between Stromeyer and Wardenburg. In 1802, Osiander took the superintendency of the hospital, but in 1803 turned it as well as the management of the Ambulatory Clinic over to Himly, who was assisted by the surgeon Langenbeck. The two institutions were combined for the instruction of the students to great advantage. Why Richter resigned the direction of the hospital after having served seventeen years and why Himly was appointed with his approval, has never been known. Himly improved the hospital; when in 1809 it had become too small, he moved it into a three-story building with two wings (from Geismarthor to Stumpfenbiel) and increased the number of beds to twenty-eight. Loder, Sömmering, Stiebel, Heusinger, Chelius and the Hanoverians, Spangenberg, Wedemeyer, Holscher, and others were educated there. Afterward many good army physicins were procured from this school for the military hospitals of Hanover. In the year 1807 there were 220 patients treated at the Hospital and seventeen practitioners with twenty-six auditors (pupils) were on duty.

Besides the Royal Clinical Institute and the Hospital the following four private clinics were established one after the other in the city: 1. Arnemann's Surgical Clinic (1796), which he established on account of the great number of patients afflicted with sore eyes and ears, and that, at his own expense paying for the medicines needed by the poor, and accepting contributions only from the wealthy. Later the institution was endowed by the government. During the first five years 1,096 cases had been taken in for surgical treatment. From 1801 on, medical patients were also admitted and then a special hospital (Medical Surgical Institute) was founded for them, in which the members of the same performed the operations. 2 The Medical Surgical Clinic founded by Wardenburg in 1799. Here the auditors were also allowed to practice operations on cadavers, and were placed in the sections that belonged to A. G. Richter's department (Physikat). This clinic was united with the Academic Hospital in the following year, accepting 349 patients (270 medical, 28 surgical, 36 operative) during that winter, besides the regular hospital patients. 3. The clinic established by Professor Cappel and the private tutor Jordan in 1801. 4. The Clinical Institute for Surgery and Ophthalmology founded by Professor C. M. Langenbeck, who then resigned his position in the Academical Hospital. In Langenbeck's Institution which was endowed and presented with a building by the board of trustees, there were treated 290 patients during the first year, 18 cataract operations and six amputations were performed and was attended by 82 students. The number of patients increased so rapidly that the structure had to be enlarged and thirty beds were now needed. Dr. Seyde and Pauli, Langenbeck's right hand man, were his assistants, the latter since 1813 at this institution which was free to all. We thus see that Göttingen had fine and exceptional facilities.

And now comes *August Gottlieb Richter*. If we modern physicians put the question: What do we know of Richter's accomplishments and achievements and his rank in German surgery, we would be compelled to answer: As much as nothing. When the writer conversed with a practitioner of the modern school, whose office was generally filled with patients, on Richter, the only praiseworthy deed he knew of him was as the author of a valuable work on ulcers; but this was an error on the part of the colleague, who had mistaken Rust for Richter. My only knowledge of him at first was, that a certain kind of scissors bore his name, and that he had written a book on ruptures. Surely there are many colleagues who are today wandering about in this wilderness. With shame we must confess that we have no complete biography of the best surgeon of but one hundred years ago. We certainly do not care about an encyclopedic order of dates and it is about the same to us when and where Richter was born, and yet of our own flesh and blood we German surgeons ought to preserve with the feeling of deepest gratitude and piety, his memory. In order to obtain the following facts regarding Richter, the writer had to interview various ones of his contemporaries still living.

Richter was born April 13, 1742, in Zörbig (district Meissen) and Her Royal Highness the Princess Augusta Carolina, the Duchess of Saxony, was his godmother. His father, George Gottfried Richter, who married Christina Dorothea Feichmann, was a master of arts and philosophy, the prime minister and the superintendent of the school in Zörbig; a brother of the above mentioned George Gottlob was professor of medicine in Göttingen, and George Frederick, professor of political economy and moral philosophy in Leipsig. Richter's grandmother, Johanna Maria, *née* Pinckertin, prided herself on her ancestry dating back to the Burgomaster Lucas Pinckert in Meissen to the year 1507, ubi gens Pinxeria jam diu ante floruit. Presumably his uncle at Göttingen, who had no children and was a wealthy man (established a fund of 1,200 thaler to be used for scholarships), won over the young August Gottlieb to the study of medicine, for,

according to the family tradition, he ought to have become a clergyman. His father, grandfather, great-grandfather and all his ancestors up to the sixteenth century were pastors, and the last one of these known, Paul Richter, was ordained by Luther in 1545. It had become a proverbial expression that clergymen are blessed with a big family, and Richter's proved no exception; August Gottlieb's father had nine brothers and sisters, and he himself had five; one of his brothers became a minister in Hanover, another was counselor of the consistory of Anhalt-Dessau, and one of his sisters married a preacher.

Having been instructed by competent teachers and sufficiently prepared to enter the university, he began the study of medicine at Göttingen in 1760, during the war. So when a hospital was equipped for the wounded soldiers, the young student joined the managing physicians and was so enthusiastic that he spent almost all of his time there. Under these circumstances, it was not surprising that he had no fascination for the learned profession of his uncle. Probably from a motive to please him, not to satisfy himself, Richter wrote a Doctor-dissertation on "de prisca Roma," after studying four years. He publicly substantiated his views on Sept. 12, 1764, "with honor," and on the 17th of the same month, at the inaugural ceremony of the Academy, received his degree from his uncle, whereupon Richter, "with due propriety expressed the usual thanks from the cathedra." Only a few weeks later, so that he might teach, he wrote a work on his observations made in connection with a cancerous ulcer of the stomach, and he defended the same with the Livonian Pflug. In October he started on an eighteen months' trip at his uncle's expense, visiting the following cities: Strassburg, Paris, London, Oxford, Leyden, Amsterdam and Gröningen. Much of his time was spent in London, where he studied with untiring diligence at the Bartholomew Hospital under Percival Pott. Richter pronounced it a most excellent school. Pott distinguished himself then especially in the treatment of diseases of the eye and hernias; later his pupil followed in his footsteps. Richter seems to have continued his friendly intercourse with his teacher, to whom he dedicated the second part of his Surgical Observations. In Paris his principal instructor was Petit, who took the lead in surgery at that time; Levret also taught him. When 24 years old, June, 1766, he returned to Göttingen and immediately received the appointment as professor. In his opening address he supported Daviel's ideas on the extraction of cataracts. Soon after he held a discourse on the great advantage of combining surgery and medicine, of which union he himself was an illustrious example. His acquirements were thus fully in keeping with the expectations that he had studied the very best surgeons while on his trip—as remarks the scientific journal of which he afterward became a contributor. He now began his course of lectures; in 1767 he delivered a discourse on surgery according to Ludwig's system, then he read one on diseases, "which required the use of instruments and surgical operations," and gave a public talk on ophthalmology. During the following semester he gave practice lessons in operating on cadavers at the Anatomical Amphitheater. In June of 1771, he became a regular professor and founded a surgical quarterly.

(To be continued.)

SOCIETY PROCEEDINGS.

Annual Meeting of the American Surgical Association.

Held in Washington, May 4, 5, and 6, 1897.

TUESDAY, MAY 4.

The President, Dr. John Collins Warren, delivered an address upon "The Influence of Anesthesia on the Surgery of the 19th Century."

Dr. John Homans, of Boston, read a paper entitled "The Indications for and the Technique of Hysterectomy."

Dr. H. H. Mudd, of St. Louis, in discussing this paper, said that hysterectomy for fibroid tumors had a technique which was not uniform and which varied with the special indications. He expressed himself as especially gratified to hear that Dr. Homans discards the clamp. In his opinion, hysterectomy for suppurative peri-uterine inflammations should be strictly limited to a very narrow field of action. Vaginal hysterectomy for malignant disease is efficient and desirable for those cases where the disease is limited to the external os. The extension of carcinoma of the os is by infiltration of new tissue in two directions, first, along the vaginal tissue and, second, into the the broad ligament. Most of the cases in which malignant growth begins in the body of the uterus should be subjected to abdominal hysterectomy as this is certainly the only method of operation where the uterus is secondarily involved. The greater number of cases of malignant disease which require hysterectomy have their origin in the os, and if presented early to the operator may be removed by the vaginal route. The preparation of the patient for those operations is in accordance with the general rule, but the author's preference is to have the patient anesthetized upon the operating table in order that the time necessary for the anesthetic may be as short as possible. The Trendelenburg position is much preferable, and the abdominal incision should be free enough to give room for rapid and accurate work. If the growth is soft and pliable, it should be cleansed with a curette, washed with sterile water, wiped with a gauze sponge and the firmer margirs approximated by sutures.

After describing at some length the various steps of the operation, the question of the ligature was taken up and silk was advised to be used in securing the ovarian artery. It may be cut short or left with one end resting in the vagina. Hemorrhages should be well controlled by ligatures or by clamps. The author has discarded iodoform gauze in all cases where it comes in contact with the peritoneum, as he considers it a dangerous agent.

Dr. F. E. Lange of New York, stated that in his opinion the principal dangers in these cases were hemorrhage and sepsis, and he thought it a good idea to lay down certain general rules to be followed in approaching all these cases. All working in the dark should be avoided. The speaker has occasionally employed a crux incision in these cases and in some has made an incision above the symphysis pubis, but has found that in some of the crux operations, the fleshy portions do not offer enough resistance, and this is especially true where the patients have not been pregnant before the operation and become so afterward. In some cases such an extensive raw surface has remained after operating, that it has been necessary to use the apron of the large omentum in order to prevent the agglutination of the intestines. The para-vaginal or para-rectal incision has also been employed to good advantage, which consists of the separation of all the soft parts along the side of the rectum. The hemorrhage is considerable in those cases and it is well to secure the vessels as much as possible before they are cut. The advantage of this incision is that the floor of the pelvis becomes much more accessible. Provision against infection is also greater because the drainage takes place away from the peritoneal cavity.

Dr. Dudley P. Allen referred to an operation in which the patient is placed in the Trendelenburg position, the fibroid is drawn over the pubes and is separated from the surrounding structures with a pair of scissors. The uterus is divided from the bladder anteriorly by a few cuts of the scissors and the broad ligament is held between the thumb and finger. This operation up to the present time has been very successful.

Dr. Albert Vanderveer of Albany, said he agreed with Dr. Homans that when curetting and all intelligent lines of practice had been carried out without recovery for the correction of misplacement, removal of the uterus is the proper procedure. As to the method of removal, he declared himself firm in the conviction that if the vagina is normal or comparatively so, if the cervix, particularly the external os, is in a healthy condition, the abdominal or supra-vaginal hysterotomy gives the pa-

tient a degree of normal vaginal anatomical relations that is comforting and beneficial to her, in addition to giving the operator an opportunity to examine the pelvis from above, to relieve adhesions, to bring under positive observation the tubes and ovaries and if not healthy to remove them. On the other hand, if there be present decided cystocele or rectocele or prolapse of one or both ovaries, then the vaginal route is to be preferred. In his opinion, the clamp should be avoided in the abdominal operation. He regretted very much the fact that these cases are not brought to the attention of the surgeon before the disease is so far advanced, and referred to the various diseases to which the condition is ascribed, as, for example, supposed change of life or ill health from last confinement or miscarriage. Speaking of carcinoma, he considered an operation was called for when it was confined to the uterus and all suspected symptoms and indications had been confirmed by microscpic examination of specimen removed. When the uterus is not too large from invasion of the body by the disease, when there is no considerable fibrosis present and when no pregnancy beyond the third month complicates, the surgical route should be through vaginal hysterectomy. The presence of a fibroid does not necessarily mean an operation, as many patients suffer so little inconvenience that such a procedure is not called for and curetting will answer in a few cases. As to the combined operation, pan-hysterectomy the author considered that but few cases called for this procedure, but when it is done, surgeons should give themselves the benefit of a free abdominal incision. He objected strongly to taking away any more of the pelvic organs than was absolutely necessary if like good results could be secured by a less severe procedure. In his opinion, it was inadvisable to place a Jacques self-retaining catheter in the bladder after these operations.

Dr. J. William White of Philadelphia read a paper entitled "The X-Rays in Surgery." He divided the consideration of the subject, 1, in its relation to foreign bodies; 2, fractures and luxations, and 3, diseases of the bones and joints. He stated that foreign bodies in the cavities of the body could be located by a system of triangulation by means of successive skiagraphs having known relations to one another and to a fixed point on the surface of the body next the plate. Bullets in the cranial cavity have been located and removed and their recognition is easy in the majority of cases, while in the thoracic cavity, they can be located with reasonable accuracy in the trachea, bronchi, lungs or pleura. Rubber drainage tubes in the pleural cavity can not invariably be detected by the Roentgen method, as they seem to be more or less translucent to the rays. Detection of bodies in the esophagus continues to be very satisfactory, and the conditions of foreign bodies in the abdominal cavity are about the same as in the thorax. Bodies in the pelvic cavity can be found by taking skiagraphs with the patient in various positions. With regard to fractures of the skull, it is especially desirable that we should be able to recognize, *a*, fracture of the inner table; *b*, linear fracture, and *c*, fracture of the base. Up to the present time, there is no case on record of the first two having been done clinically, but it has been done experimentally with entire success. Skiagraphy will doubtless result very beneficially in the future in the prognosis and treatment of fractures and dislocations of the spine, and will no doubt give us great help in obscure cases of fracture of the sternum, scapula, clavicle and pelvic bones. On account of the movements during respiration, skiagraphing the ribs is especially difficult, but this movement can be much restricted by a fixed dressing not opaque to the rays. Fracture and luxation of the bones of the extremities can usually be readily demonstrated. Ununited fracture even in the presence of close fibrous union can be demonstrated with great accuracy. In disability following old fractures near joint, skiagraphy has been of the greatest help in determining the mechanical cause of the limitation of motion. Referring to the medico-legality of this matter and to the question of whether or not the patient has a right to demand as ordinary care that the medical attendant should have a skiagraph of the fracture taken, the author stated that at the present time he would unhesitatingly answer in the negative. There can be no doubt, however, that skiagraphs will figure largely in suits for damages in the near future. There is no doubt that a definite diagnosis will soon be possible in cases of diseases of the bones and joints and it is evident that skiagraphy has added to the precision of our management of many forms of these diseases. In various forms of cardiac disease, the fluoroscope is likely to be more useful than the skiagraph, as, in the case of organs in motion, the skiagraph can only give the net result during the period of exposure. Referring to the amount of exposure necessary, the author stated that this varies very much, and in the case of stone in the gall bladder, thickness of the abdominal walls and the depth of the calculi from the surface played an important part. Renal calculi had been found and succesful operations performed based on the skiagraph evidence, while vesicle calculi are more difficult to find on acount of the super-position of the pelvic bone. Urethral stone has not yet been seen clinically, but seem likely to be easy of recognition. As to the possible therapeutic properties of the rays, they were first thought to be germicidal, but this has since been denied. The author stated that he had directed his attention to the cure of cancer with the rays and his hopes of success had been somewhat bolstered up by his experience, although as yet he had no results to report. In the meantime, he felt confident that no harm could come to the patient, even though the experiment should be unsuccessful.

DISCUSSION.

Dr. W. W. Keen of Philadelphia in discussing this paper, called attention to the importance of the medico-legal relations of the X-rays and mentioned a case showing the unreliability of skiagraphs as a means of diagnosis.

Dr. Charles B. Nancrede of Ann Arbor dwelt upon the importance of taking skiagraphs in various positions and quoted cases in support of his statement that one or even two or three pictures should not be used as a basis of diagnosis. He also stated that the fluoroscope will occasionally be successful where the skiagraph has failed and *vice versa*. He illustrated his remarks with several skiagraphs and mentioned that an apparatus costing $50 would throw a spark seven and three-quarter inches and do all that was necessary in the majority of cases.

Dr. G. R. Fowler of Brooklyn dwelt upon the importance of taking in various positions and mentioned a case in which he was able to demonstrate in a perfectly sound limb an apparent deformity similar to that which existed in a previously injured limb. He also stated that the fluoroscope was often of use when the skiagraphs gave negative results, and laid great stress upon the possibility of defective skiagraphic plates.

Dr. M. H. Richardson of Boston showed a number of skiagraphs and laid great stress upon the medico-legal relations of the X-rays. He stated that a number of judges had signified their intention of admitting these pictures as evidence in suits of malpractice.

Dr. Williams showed a number of skiagraphs and also demonstrated an instrument for showing calculi in the bladder.

Dr. Christian Fenger of Chicago referred to a case in which search was made for a bullet in the cranium and in which the soft parts of the skull down to the bone subsequently died, presumably due to too long exposure.

Dr. Edmond Souchon read a paper entitled "Operative Treatment or Irreducible Dislocations, Recent or Old, Simple or Complicated."

The writer considers all the forms and varieties of irreducible dislocations and studies for each one, the operation performed, the difficulties and complications after the operation, the results immediate, the results remote, and formulates the conclusions as to the advantages of each. The study is based on 140 operated cases. The profound silence of text-books and also of special books on dislocations in regard to this most important subject renders this study most imperative and timely.

All irreducible dislocations recent, simple or complicated, with fracture, that were operated by reduction or resection have given good results with one exception, in which death does not seem to be due truly to the operation alone, but to a complication of shock, unusually severe at that.

Irreducible dislocations, old, simple and forward, operated by resection through an anterior incision, are the most frequent, fifty-six cases against thirty-three by arthrotomy and reduction. Results remote show a great mortality percentage in resections from injuries to the vessels, but this is unavoidable with special care. The fatalities in reductions are due to sepsis, now preventable. The disadvantages of reductions are necroses of the cartilages and of the bone of the head, calling later for sequestrations and resection.

This is probably due to the greater dissection, and denudations of the head and surgical neck necessary to reduce than to simply resect the head. Reduction is the more desirable operation of the two because it preserves the head and all the movements depending therefrom, but the necrotic consequences are serious drawbacks, as also anchyloses following sometimes the reduction. It should not be resorted to unless it can be done easily, without too extensive dissections, although it may be necessary to use hooks, levers and some curetting of the cup, as the cases reported show. The duration of the dislocation is immaterial; it is the condition of the parts that is all important. Recent irreducible dislocations have given as much if not more trouble to reduce than dislocations of months' standing.

The anterior incision is the route in all forward dislocations; almost all forward cases operated by the axillary route and the posterior incision have been unfavorable.

Cases reported as operated by subcutaneous section of fibrous bands, of tendons, of muscles and by osteotomy have given good results, but they are so few. It seems extraordinary that surgeons have not employed the method oftener; perhaps they have, but having failed, have not reported the cases. In considering the extent and density of the tissues binding down the head and surgical neck to the surrounding parts, as reported by operators, it is a wonder that these methods should succeed except in very selected loose cases.

Irreducible dislocations, old, downward, four in number; have all been treated by the axilliary incision with the resection, *i. e.*, removal of the fractured head more or less loose in the axilla, with favorable terminations. In one case, however, the head was "pegged back" and reduced, with a good result. One downward dislocation (Desprès) was treated by osteoclasia, but it was a failure, no false joint forming. Yet there are cases on record of forward dislocation in which the bone was fractured near the head, or through the surgical neck during efforts at reduction and which yielded a fair enough result.

Irreducible dislocations, old and backward, in the adult, have been reported twice. They were operated by resection with a very ordinary result.

Irreducible dislocation, old, upward and operated, have not been found on record,

Irreducible dislocations, congenital, have been operated several times; they were old, backward dislocations. Two cases were operated by reduction; one case died, the other had to have sequestra removed, and then did well. Three cases were operated by resection, two with good results; the third one is not stated.

Irreducible old dislocations in young subjects or in old subjects are duly considered; also old dislocations double, *i. e.*, of both shoulders; also spontaneous or pathologic paralytic irreducible old dislocations.

The forms and varieties due to complications are fully treated and also the forms and varieties due to relapses or recurrences and to the sequels of the operations performed for irreducible dislocations and old, simple or complicated.

Dr. J. Ewing Mears of Philadelphia, referring to Dr. Souchon's paper, advised that the word "irreducible" should be dropped and the word "unreduced" should be substituted. The word irreducible is a term which can be applied when efforts at reduction are limited to manipulation, while the word unreduced would refer to dislocations which could not be reduced even by operative procedures. He suggested that some rule should be laid down as to when a fracture should be considered acute and when chronic. In all cases of recent dislocation of the shoulder which can not be reduced by manipulation and operation is considered advisable, he recommended an incision through the deltoid muscle as being probably the best method. He considered that disability and pain were the two indications for operative interference in old dislocations and mentioned that he had seen cases of old unreduced dislocations in which as much freedom of movement had been accomplished as was necessary for excision of the head of the bone without any bad effects resulting. In some old cases of dislocation he considered massage as being very advisable before resorting to operation. With regard to the relief of pain in these cases, he thought any operation that would relieve pressure should be performed and that that was a question that could hardly be discussed. He referred to an operation performed by himself in 1886 in which he did a subcutaneous section of the neck of the humerus in which the object was to form a false joint. Although the operation was successful as far as the relief of pain was concerned, upon the death of the patient one year later, examination showed that a false joint had not been formed, but union had taken place at an obtuse angle in such a manner as to pull the head of the bone off the axillary plexus. The tissues around the joint had been stretched to such an extent as to permit the head of the bone to almost return to the cavity of the glenoid.

Dr. Joseph Ransohoff of Cincinnati considered that operative treatment in uncomplicated dislocations of the shoulder of recent occurrence were so readily reducible under anesthesia by manipulation, that operative treatment very rarely came into the question, and that unreduced dislocations of long standing, as far as treatment is concerned, must be entirely determined by the degree of disability entailed. Where this is slight, the patient is enabled to gain a livlihood, and pressure symptoms are absent, particularly if the dislocation is one of more than two or three months' standing, the advisability of operative interference must be questioned; but pressure upon the vascular or nerve trunks was a positive indication for operative interference. The operations suggested and practiced for irreducible dislocation of the shoulder are, 1, subcutaneous division of the adhesions; 2, subcutaneous osteotomy of the neck of the humerus; 3, arthrotomy; and 4, resection; but the French surgeons alone advocate the first named, the last two being most frequently indicated. In old cases, even where reduction is accomplished, there remains where the head had been contained a large cavity bounded by firm fibrous walls and often lined with an imperfect serosa which closes with difficulty and affords a ready nidus for infection. The earlier that interference is practiced, the better are the end results. The immediate fatality following arthrotomy is very considerable. The present status of the question of operative interference in shoulder luxations may be summarized as follows:

1. Immediate operative interference is indicated when the ordinary methods by manipulation under anesthesia have failed. 2. In irreducible dislocations, operations should not be delayed until irremediable changes have taken place in the capsule and about the humeral head. In comparatively recent cases arthrotomy offers the best end results. 3. In old standing cases the conditions found must determine the choice between arthrotomy and resection. 4. In unrecognized dislocations of long standing, a year or over, only grave compression symptoms must be recognized as indications for interference. 5. Special attention must be given to the prevention of sepsis, since in a very large proportion of cases recorded sepsis has been either the cause of death, or, by the destruction of the humeral head or obliteration of the joint cavity, has frustrated the very object of the operation.

Dr. Owens of Chicago stated that his experience with cases of this kind was only three in number, the first of which was of the subcoracoid variety in which attempts at reduction were unsuccessful and it was necessary to cut down through the deltoid muscle into the joint. Caries, suppuration and necrosis set in and finally resection had to be done. Since this case, he had seen one which proved to be a dislocation of seven or eight weeks' standing, although it was said to be a fracture. In this case an incision was made through the deltoid muscle, which was enlarged with a probe-pointed bistoury, but it was still impossible to reduce it. The subscapular tendon was then divided and although nothing could be found which seemed to be holding the bone, it was still impossible to reduce it and a resection had to be done which was followed by excellent results. The third case was one of dislocation which had been overlooked and mistaken for a fracture, and in this case also manipulation failed. In performing Kocher's method of rotation of the arm outward, the upper end of the bone gave way. Its position was improved at once and the pain finally disappeared. In order to prevent union, and to make a false joint if possible, the bone was moved every day. Movement increased and considerable usefulness was secured, so that he was satisfied with this accidental result.

Dr. John D. Roberts of Philadelphia referred to one case in which, in attempting to reduce it, much bruising of the soft parts resulted, and it was necessary to postpone operative interference until this condition improved. Later he discovered that he had put the head of the bone on the brachial plexus, so that the patient was worse off than ever and resection was necessary. The patient succumbed from shock and hemorrhage within twenty hours.

Dr. L. McLane Tiffany of Baltimore saw no reason why cases of dislocation of the shoulder joint should be considered in a different manner from those of any other joint, and considered free opening a proper procedure. As to the time when a joint should be considered irreducible, no hard and fast rule could be laid down as the variation is too great. After the head of a bone is firmly fixed in its abnormal position, resection is the best thing to do, as a painless and useful arm will invariably result.

Dr. Souchon closed the discussion of the paper, and referred to the fact that even Dr. Kocher had fractured cases in his attempts to reduce dislocations, and one patient had died. He spoke against waiting too long before operating on these cases on account of the adhesions which so often occur. He considered the deltoid muscle the all-important factor in the operation, and particularly on account of the division of the filaments of the circumflex nerve and the resulting paralysis. He laid great stress upon the after-treatment, and particularly as to when it should be commenced, stating that this must be decided according to the case.

Dr. E. H. Bradford of Boston read a paper on "Tendon Anastomosis." Referring to the transplantation of tendons and tenoplastic surgery, he spoke of the good results which have followed the transference of one of the peronei muscles from one side of the limb and attaching them to a paralyzed

muscle on the opposite side to correct a deformity of the foot resulting from such paralysis. He also referred to the union of the anterior tibial and extensor longus pollicis muscles, to shortening of the extensor tendons of the foot and also of the tendo Achillis, as well as transplantation of the sartorius tendon. In cases of spastic paralysis, he advocated lengthening of tendons and muscular fasciæ in the popliteal space, in the groin, in the forearm and in the hand. He also showed diagrammatically a method of splitting the patella, of shortening a lengthened ligamentum patellæ and shortening a relaxed capsule. He stated that before transplanting a muscle one should prove by electricity that the muscle itself is alive and healthy and that the muscle to which it is to be attached is strong enough to do the work. He stated that excellent results have followed these operations, and demonstrated with photographs and drawings cases before and after operation.

Dr. John B. Roberts of Philadelphia referred to a case in which paralysis of the extensor of the fingers existed and in which a laceration of the common extensor was found. Upon attaching the piece of tendon of this muscle to the thumb, the hand was rendered practically as good as ever.

Dr. De Forest Willard of Philadelphia stated that in a number of cases in which he had employed similar methods, much improvement has followed.

Dr. Bradford closed the discussion by referring to a case of Dr. Dawbarn's in which the insertion of the ligamentum patellæ was transferred by chiseling off the tubercle to which it is attached, crushing a portion of the tibia and inserting the tubercle there.

Dr. John B. Roberts of Philadelphia read a paper entitled "The Surgical Treatment of Suppurative Pericarditis." The author advocated, as he had since 1876, the treatment of pericardial effusions in the same manner as pleural effusions, and stated that paracentesis was insufficient to cure suppurative pericarditis. Incision and drainage were essential, and should be adopted as soon as the diagnosis of pus in the pericardium was made. The diagnosis of the purulent character of the effusion was only determinable by exploratory puncture. This should be done at the upper part of the left xiphoid fossa close to the top of the angle between the seventh cartilage and the xiphoid cartilage. Pericardotomy should then be done after resection of the fourth and fifth costal cartilage in the manner described by the author. The operation was believed to be novel in some of its details, though others have recommended and operated by various forms of resection. This method was devised to avoid injury of the left pleura, which is nearly always a complication in the ordinary methods of puncturing or incising the pericardium. As a rule, empyema is liable to occur as a sequel of pericardio-puncture or incision in suppurative pericarditis. The prognosis is good in pericardotomy for pyo-pericardium. In a table of 26 collected cases 10 recoveries and 16 deaths were shown. This gave a percentage of recovery of 38 44. Of the fatal cases at least 9 were septic, and all the others which died had complicating lesions such as pleuritis or pulmonary, cardiac or renal lesions. The operation devised by Dr. Roberts consisted in raising a trap-door of the fourth and fifth costal cartilages and connecting the soft parts, and using the tissues of the third interspace as a hinge. The internal mammary vessels and left pleura are thus exposed and pushed to the left.

Dr. Charles B. Porter of Boston discussed this paper and gave the history of one case which was operated on in a manner similar to that recommended by Dr. Roberts. The result in this case was that after convalescence was established the patient was in excellent health, and was able to ride a bicycle a considerable distance without fatigue. With regard to the indications for the operation, it may be said with confidence that the percentage of recovery after its performance warrants the statement that it is indicated in all cases of purulent pericarditis. The author then referred at some length to the surgical anatomy of the pericardium, and said that the ideal operation was as far as possible, 1, to avoid opening the pleural cavity; 2, to open the pericardium opposite the point where drainage will remain good after the sac has contracted; and 3, to secure permanent and free drainage. He then detailed the steps of the operation, and referred to a number of cases of reported recovery from purulent pericarditis treated by incision and drainage. A number of charts and diagrams accompanied the paper.

Dr. J. McFadden Gaston of Atlanta, Ga., discussed this paper, and stated that discussions on this subject have lately inclined to more vigorous measures of internal treatment before using any means of mechanical evacuation, the reason being more urgent in pericardial effusions than in pleural effusions. It may be said that aspiration is not applicable to purulent collections in the pericardium and should be limited to serous effusions. The author then referred to a number of medical publications in which references were made to this subject, and stated that the only means available for testing the character of the contents of the pericardium is the aspirator or the hypodermic syringe. If serum is found, it should be evacuated, and medication with such agents as have been found most efficacious in serous pleural effusions, but if a purulent collection is already present, the case required a resort to incision and drainage without any delay.

Dr. Dudley P. Allen of Cleveland, and Dr. G. R. Fowler of Brooklyn, also commented on this paper favorably.

Dr. Roberts closed the discussion by stating that he would add the cases referred to by the discussers to the statistics in his paper.

Dr. S. H. Weeks, of Portland, Me., read a paper entitled "Report of a Case of Removal of the Gasserian Ganglion." The author gave the history of the case as related by the patient himself and the only apparent cause for the neuralgia seemed to be excessive mental work. After describing at length the details of the operation, the speaker stated that the only marked symptom remaining is inability to call up or speak certain names. There seems to be a limited amount of aphasia, which has been present from the first but which is gradually disappearing.

Dr. G. R. Fowler of Brooklyn, stated that he knew the patient in this case personally and could vouch for his intense suffering previous to the operation.

He also reported that the two cases of ligature of the common carotid and of the external carotid performed to starve off the Gasserian ganglion which he reported to the society last year have remained free from a return of the disease.

WEDNESDAY AFTERNOON.

In conjunction with the Alumni Association of the Jefferson Medical College of Philadelphia, the Association unveiled the statue of the late Prof. Samuel D. Gross, M.D., near the Army Medical Museum. Dr. C. A. Mastin and Dr. W. W. Keen delivered addresses, the statue being presented to the United States Government by the former.

THURSDAY MORNING.

Dr. Dudley P. Allen of Cleveland, read a paper entitled "The Origin of Appendicitis."

The author considered that there are three factors which must have some causative relation to disease, first, a bend of the appendix itself; second, a stricture of the appendix on the proximal side of the inflamed portion, and third a great increase in thickening of that portion of the appendix distal to the point of flexure and stricture. The author dwelt at great length on the pathology of the disease, and illustrated his remarks with a number of drawings demonstrating the histology of the appendix, as well as with an actual appendix and also with a fetus showing the appendix *in situ*. In concluding his paper, the author summarized his conclusions as follows:

1. In the descent of the cecum from the right hypochondriac to the right iliac fossa, the position of the appendix with relation to the cecum becomes changed.

2. The bend thus produced may be sufficient to embarrass the passage of the contents of the appendix into the bowel.

3. To empty the appendix an increased effort becomes necessary on the part of the muscular coats.

4. The increased effort on the part of the muscles results in hypertrophy, amounting in the specimen presented to nearly five diameters.

5. Increased pressure at the point of flexure produces irritation and inflammation causing destruction of mucous membrane, and at length organic stricture.

6. The hindrance to the escape of mucus produces the repeated attacks of pain resembling colic.

7. When the escape of the contents of the appendix is no longer possible, either from the tightness of the stricture or because it is closed by a concretion too large to escape, distension of the distal portion may gradually go on to perforation, or if the distension be rapid and extreme to gangrene.

8. In some cases the inflammatory process may not cause perforation but terminate in destruction of the mucous coat, and final obliteration of the lumen of the appendix.

Dr. L. M. Tiffany of Baltimore read a paper on "The Technique of Cranial Surgery." The author dwelt at some length on the difference between traumatic and pathologic operations, the best way of gaining access to the brain, and the various methods of arresting hemorrhage. He also went into considerable detail concerning the recognition of the brain area presenting through an opening in the skull, the removal of intracranial structures and the closure of the wound.

Dr. W. W. Keen recommended Pyle's chisels for opening the skull and stated that no rule could be laid down as to the size

of the opening necessary, each case being a law of itself. He was not in favor of employing the dental engine in opening the skull for several reasons, but he was in favor of osteo-plastic operations in certain cases. He advised that the operation should be performed in two stages. The interval between each to be governed according to the special case.

Dr. Weir of New York discussed the question of hemorrhage and the various methods of controlling it. He has to a large extent given up the use of the chisel, and rarely resorts to osteo-plastic operations.

Dr. J. Parmenter of Buffalo preferred the gouge and hammer to the chisel, as he considers them less dangerous. He advised against the practice of palpating the intra-cranial structures and laid great stress upon the importance of cleanliness in these operations.

Dr. S. J. Mixter of Boston considered that no trephine should be over three-quarters of an inch in diameter and believed in the employment of extensive flaps rather than run the risk of having to enlarge the incision. He also suggested the placing of a piece of celluloid between the skull and the skin to prevent adhesion where the operation is performed in two stages. He thought the question of how much pressure the brain could stand, and how much compression was safe in the case of hernia of the brain were very important. He recommended the presence of a skilled pathologist when exploring the brain so that removed fragments might be immediately examined and their true nature determined.

Dr. Christian Fenger of Chicago read a paper entitled "Ureterectomy." The author stated that ureterectomy had been performed for, 1, tuberculosis; 2, suppuration in the dilated ureter; 3, hydro-ureter, non-infected dilated ureter. He referred to the operations as primary, secondary, total and partial. He considers a primary as one when the ureter is removed simultaneously with the kidney; a secondary operation when after nephrectomy the removal of the ureter of the same side becomes necessary, as total when the entire ureter is removed and as partial when only a portion of the ureter is removed. He gave four methods of operating, 1, transperitoneal; 2, extraperitoneal; 3, sacral; 4, trans-vaginal.

Dr. A. T. Cabot of Boston saw no special advantage in transplanting the end of the ureter into the vagina, and he thought the discharge from the lumbar fistula quite as endurable as from the vagina. He advised that the ureter should be cut off as low as possible when it was tuberculous, stating that the remainder could be removed if necessary subsequently.

Dr. M. H. Richardson of Boston read a paper entitled "A Case of Fenger's Pyloroplasty for Intermittent Hydronephrosis." In this case it was only when pain and tenderness were present that the tumor could be felt, and it was supposed to be a distended gall bladder, but proved to be an enlarged renal calculus. After describing at some length the steps of the operation, the author stated that the patient made a good recovery and has no recurrence of the symptoms.

Dr. Richardson read a paper entitled "A Case of Chronic Intestinal Obstruction from Incomplete Volvulus of the Sigmoid Flexure." This case occurred in a man 47 years of age who had constipation alternating with watery discharges, and occasionally sudden pains. Upon opening the abdomen the sigmoid flexure was found to have a capacity of at least two gallons, and was so twisted upon the colon as to obstruct the fecal flow. After untwisting the colon it was fastened to the abdominal wall and the patient made a complete recovery.

Dr. H. Burrell and Dr. R. W. Lovett of Boston read a paper entitled "Habitual Dislocation of the Shoulder Joint." The author mentioned several methods of treating these cases, mentioned the way in which the X-ray and the fluoroscope acted in these cases and referred to two cases successfully operated upon.

Many other papers were read by title.

Chicago Academy of Medicine.

Regular Meeting held April 9, 1897, at the Leland Hotel.

Dr. William L. Ballenger in the Chair.

Dr. L. Blake Baldwin reported a case of "Erythema Multiforme Bullosum."

On February 2 I was call to see a young man 21 years of age, American, single. Family history: Father and mother both living, brother died nine years ago of phthisis, sister died one month ago of phthisis, another sister has been operated upon for tubercular glands of the neck.

Personal history: Patient has always been of slight weight, about 112 pounds. Suffering from infantile paralysis when 4 years of age which resulted in ankylosis of the ankle joint; the leg shows arrest of development. He has suffered from attacks similar to the present one since his 8th year. They recur about once in eight months. Dr. Jaggard treated him for the first attack, which was diagnosed as herpes zoster. The attacks have been increasing in severity. Each one of these attacks has been preceded by a distinct emotional disturbance, the last one following the death of his sister, which created the suspicion that the exciting factor is a nervous one. He camplained a great deal of pain in the joints about a week before each attack. The pain increases until eruption appears.

Present illness began about January 15. Complained of nervousness and irritability, which increased up to the time I saw him until he would cry with pain if you touched his hands or feet. He complained chiefly about a prickly and itchy sensation about the plantar surface of his feet and the palmar surface of his hands. Also that the skin about these parts felt as if some one was was holding a hot iron about an inch away. Upon examination I found papules upon the palms of his hands and the soles of his feet. On the next day the ankles were covered with small papules, as were also the knees, the wrists and the lips. These enlarged so that they formed bullæ from a pinhead to a ten-cent-piece in size. The mouth and throat were next involved, the tongue having eight large bullæ upon it, and was so edematous that the patient could not articulate. The bullæ extended down his throat, covering the tonsils and induced painful respiration. The coverings of these bullæ were of a dirty, grayish-white color, rupturing early and leaving exposed the swollen, easily bleeding papillæ. The bullæ upon the lips and adjacent skin ruptured later and upon their site there appeared black crusts consisting of dried serous exudate and blood. Some of these bullæ were originally of a distinctively hemorrhagic character. There was evidently considerable irritation of the salivary glands, as the quantity of saliva approximated that in acute stomatitis.

The patient has had similar attacks of a less severe type since he was 8 years of age. They occur about once in eight months. Upon the strength of these symptoms I made the diagnosis of erythema multiforme exudativum bullosum, which diagnosis was corroborated by Dr. Baum. The local symptoms rapidly subsided upon internal administration of eliminatives, cathartics and 5-grain doses of sodium salicylate with ½ grain ergotin every three hours. Locally no application was made, but an astringent wash composed of 1 dram of fluid extract of eucalyptus rostrata to a glass of water was prescribed. The patient was confined to the house for ten days. After the subsidence of the local eruption there remained a considerable amount of pigmentation, which is slowly disappearing. There are several interesting features about this case. 1, the frequent recurrences, always preceded by violent emotional disturbances, and the increasing severity of each successive attack; 2, the extensive involvement of the mucous surfaces of the mouth and throat. These latter mean a serious menace to the life of the patient, as shown in the reported case by A. Lanz (*Archiv für Dermatologie und Syphilis*, Bd. xix, 1887, p. 575).

This patient is neurotic, mentally irritable, has the general nervous and metabolic instability frequent in this type of patients. In this case the instability has expressed itself in digestive disorders, after severe emotional disturbances, which have resulted in such malassimilation that the local manifestations are the expression of auto intoxications, acting through the vasomotor centers.

Dr. William A. Pusey—I agree with Dr. Baldwin's diagnosis in the case he has reported, and I mention this at the beginning because the question of diagnosis in these angioneurotic disturbances of unusual type is a very difficult one. The whole question of the angioneurotic dermatoses is an extremely interesting one, and every case illustrating a peculiar type is worthy of record. From the simplest to the most complicated forms of these dermatoses there is the widest divergence. At one end of the scale we have such simple disturbances as macular erythema and urticaria, next in grade to these we find the ordinary forms of multiform erythema—the papular and tubercular and circinate erythemas, then the bullous and vesisular erythemas; and at the other end of the scale we meet those most peculiar and striking diseases, pemphigus and dermatitis herpetiformis. I think there is a drift of opinion among dermatologists to the view that all of these are clinical manifestations of very closely related pathologic processes, and I believe they all deserve to be classed in one pathologic group. Such a case as Dr. Baldwin has presented tonight is peculiarly interesting as showing a transitional type of these conditions. Such a case, with its emotional disturbances and other evidences of marked nervous instability, presents many differences from the average case of erythema bullosum. On the other hand, while in its nervous symptoms it strikingly suggests to one the graver forms of these disturbances, like der-

matitis herpetiformis, it certainly could not be classed as a case of that disease. Indeed, I think such a case has its chief interest in the fact that it presents a transitional type. I agree with Dr. Baldwin that it is probably a toxemia. The patient, I infer from Dr. Baldwin's remarks, has pulmonary tuberculosis, and I imagine that the toxemia in the case is of tubercular origin. There is a peculiar form of erythema associated with tuberculosis, namely, the indurated erythema of Bazin, in which tubercular gummata occur. I mention it here because it is of tubercular origin and to express the opinion that it belongs to an entirely different class from those erythemas like the case under consideration due to the presence of toxins.

Dr. William L. Baum—The question of erythema multiforme is one that interests dermatologists and most general practitioners. Cases of this type present clinically interesting features, mainly on account of the frequency with which the diagnosis is not made. As for its etiology, we know but little. It is my belief that the vast majority of cases are due to an irritation of the vasomotor centers. This irritation may simply be the result of a predisposition in the system itself, or it may be due to a reflex irritation from the absorption of some of the products of digestion. All of us have undoubtedly not only seen in others but in our own persons have experienced a sensation of distress following a hearty meal when something has happened to us, causing unpleasant emotional disturbances. If such conditions arrest the ordinary process of digestion, we must expect in certain individuals that there will be a greater amount of resorption of partially digested food products which in themselves not only act as irritants but as powerful poisons to the system. So, in cases like this, where there is a pre-existing defect in the nervous system and the system generally, it is no small wonder that such irritation should be excited and produce these disastrous consequences. This case is interesting in view of its frequent occurrence, as the Doctor has said, and in view of the fact that sooner or later by progressive recurrence it will become a formidable disease for the individual. When I saw the case in connection with Dr. Baldwin the patient had a large number of bullæ which had broken down in the mouth. The tongue was so edematous that the patient could hardly close his mouth and the bullæ extended upon the posterior walls of the pharynx as far down as could be seen. There are a number of cases on record of the extension of these processes so as to produce partial suffocation, and there is no doubt but that such cases may have occurred without having been reported. Another feature is this, that if these violent disturbances can take place upon the mucous membrane of the mouth and throat, it is but reasonable to suppose that they also occur upon the mucous membranes in the deeper lying structures, and this is one feature frequently found associated with these attacks. For instance, in a case in which I have noted a number of recurrent attacks of erythema multiforme, I have also noticed that the patient had always coincidently a very violent ileocolitis. This ileocolitis was not, as was first supposed, due to infection with the bacillus coli communis, but was evidently due to an irritation of the vasomotor centers, because the patient had hemorrhages from the bowels and has passed large mucous casts from the intestinal tract. I should look upon this as being eminently a vasomotor disturbance occurring in patients whose system had been previously undermined, and not so much to the general toxemic condition *per se*.

Dr. James G. Kiernan—One point that impressed me with regard to the case narrated by Dr. Baldwin and that is, on the one hand, the defect shown in the predisposition to tuberculosis (it being a congenital or hereditary defect) and, on the other hand, the factor of emotional disturbance. It is a very striking thing when you study the untoward effects of drugs which depend in no small degree on the two predisposing factors which make up the etiologic moment, namely, the constitution of the individual, as narrated, and the constitution of the patient at the time the drug is administered, that you notice in all the classes which play a part on the general system through the nervous and alimentary systems one uniform, or practically uniform untoward disturbance. In almost all of those you will find a simple erythema or an erythema resembling that which has been described as bullæ. Furthermore, if we take the untoward effects which have been from time to time reported by observers in connection with the use of the antitoxins, whether the streptococcus antitoxin or the diphtheria antitoxin, we will find no small number of cases which in many respects resemble the case described by Dr. Baldwin. Now, it seems to me, that in dealing with this subject we have to consider, in the first place, the predisposition; in the second place, the condition of the individual at the time the disturbance occurs; thirdly, the exciting cause and the vicious circle which is produced by all three, as Dr. Baum has put it. Undeniably in that class of cases in which we have erythema with bullous disturbance and the other conditions that occur with the insane, we will find so-called membranous enteritis in not a few cases. There are probably not a few cases in which the general condition is demonstrable as connected with some emotional disturbance, while the exciting cause of erythema also is connected with that emotional disturbance. It seems to me, therefore, that in dealing with these conditions we should take into account the general nervous state of the individual, as well as the disturbance of the gastro-intestinal tract and the liver and the resultant auto-intoxications. While it is true that auto-intoxication will play a large part in not a few of these cases, still there are a large number of others in which the vasomotor disturbance, directly traceable to a condition of emotional overstrain, can be proven to exist. The question is of considerable importance from the standpoint of orrhotherapy, especially since we are more and more observing the untoward effects of drugs.

Dr. W. X. Sudduth—The remarks of the preceding speaker brings up the question of emotional states for consideration in connection with the case reported. The question arises, what is immunity? What is intoxication, and what are the conditions that favor intoxication? I have at the present time a case under treatment that has given me an excellent opportunity to study the effect of the emotions in intoxications. A sinus, following a surgical operation, of some four or five months' standing, at the present time secretes pus periodically; at other times it is in good shape, and the periodicity is dependent upon the emotional condition in which the patient periodically finds herself, and we can exactly prognosticate the condition that will result following the emotional disturbance. On the other hand, what is it that gives immunity from infection? Why is it that physicians, priests and nurses go among epidemic diseases and in the main escape infection? And why is it other people are taken down with epidemics when they come? Why is it people panic-stricken are the first to come down? I attribute it to the fact that the emotional disturbance changes the secretions of the body, making them good culture media. I have seen experiments made in the hypnotic state with tests for anesthesia, when hatpins were taken from the hats of women in the audience, run through the cheek, and through the biceps muscles, and yet have never seen infection follow. In all cases the affirmation went ahead, "this will not hurt you." The patient was disarmed of fear and had immunity from infection. And these are surely points we must consider in these forms of disease. This particular case I speak of, where a recurrence of suppuration had invariably followed on the part of the patient to entertain fear or a fearful result to herself, just as sure as she anticipates that condition of mind she has a recurrence of the discharge of pus. I have seen this in so many cases, that to me it is positive evidence that the emotions play an important part in the matter of infection, and also in producing immunity. A hopeful, joyous, happy frame of mind gives immunity; whereas a fearful or even apprehensive state of mind tends to change the fluids of the body so as to permit of infection.

Dr. James G. Kiernan—It seems to me, in limiting the principle of auto-intoxication in the way it has been done, the fact is ignored that is very frequently essential, that auto-intoxication precedes toxemia, and that after all the limitation is a little too narrow in regard to the general question of etiology.

With reference to the question of immunity, incidentally raised by Dr. Sudduth, there is very little doubt but that the general tropho-neurotic condition of the patient plays a part, and may be dependent upon an emotional state. Kasparek, whose observations were published about two years ago and have been verified by experiments since, tried the old experiment of Brown-Séquard of making a section of the sciatic nerve on one side in a rabbit, and then injecting the ear on the opposite side with various pyogenic bacteria. Some time after, a given time being allowed, the rabbit was killed. The side on which the section had been made, which would produce certain tropho-neurotic conditions, was found to be the seat of very grave and large abscesses, but the side on which the sciatic nerve was healthy was found to be free from abscesses. It would seem, therefore, from this demonstration that the tropho-neurotic states play a part in the predisposition to microbic invasion on the one hand and their interactions also play a part in producing immunity on the other.

Dr. Fenton B. Turck—I simply wish to object to the indiscriminate use of ascribing the conditions to toxemia. In the first place, to prove the existence of toxemia we are obliged to find the toxins. In the next place, we must determine the origin of the toxins. Thirdly, we should endeavor to determine the excretion of the toxins. The work of determining

toxemia by examinations of the urine, as has been done by Bouchard, on animals, is faulty, because the urine varies at different times, and the degree of concentration of the urine present is not accounted for in connection with the experiments and the conditions existing. An examination of the material taken from the stomach, has been carried out by myself, but this also is a source of error, for the variations that occur physiologically would in the same way mar the perfect scientific work of determining the exact toxicity of the contents. An examination of the blood would probably offer better evidence, in that if the toxins are found circulating in the blood and we can produce an action upon the animal, it is more conclusive evidence that toxemia exists. Van Gieson has carried out some very interesting pathologic experiments upon animals and has found the effects of toxins upon the neurons, showing parenchymatous degeneration of the cells of the cortical area. Now in this we are nearer determining the question of toxemia.

Concerning the question of toxemia from the intestinal tract something is definitely known, yet in the absence or exclusion of toxemia from the retention of metabolic products, it offers a very interesting study. But, at present, we are in no position to generalize and to make sweeping statements that a certain case is one of toxemia. It would be interesting if, in some of these cases, we could take the urine, the stomach contents, the fecal excreta and blood and by combined biologic and chemic methods examine them until something more accurate is arrived at. This is being done now, and I think it is better for us to make statesments with a little caution, and, at the same time, await future results. At the time when bacteriology was first presented to us, all manner of diseases were ascribed to various forms of bacteria, and every time a postmortem was made and a certain microbe was found, the microbe was ascribed as the cause of death. The result was that our literature was filled with statements that were untrue, and had to be retracted; so that, at present, in reference to toxemia it is safer for us to be cautious in making statements. I would not like to say in a paper like this, before a scientific body, that this or that case was one of auto-intoxication without first having made experiments to determine the presence of toxins. I believe this can be done by withdrawing blood from patients and thoroughly examining it, as well as from examinations of the urine at different times, and withdrawal of the stomach contents in these cases. The poisons thus extracted can be injected into animals and results obtained.

Dr. William A. Pusey—I want to do some more protesting, and this time it is to take pronounced exception to Dr. Turck's statement that we can not scientifically attribute a condition to toxemia until after we have found the toxins either in the fluids or tissues of the body. It would be a happy day for medicine if the chemic and biologic means at our disposal would admit of such exact analyses. But in the present state of our knowledge I believe that most of those who are familiar with the uncertainties of analysis of highly complex organic products will admit that the actual determination of most of the toxins are problems at present beyond us. On the other hand, the determination of toxemias by indirect evidence is in many cases capable of the strictest scientific accuracy. For example, we have an urticaria in a patient after eating tomatoes or strawberries; we must wait until the infinitesimal quantity of toxin that is causing the trouble can be determined before we accept the position that such a condition is a toxemia? Or take another patient, with constipation, who develops urticaria; clean out the bowels thoroughly and his urticaria disappears; does it shock any of our ideas of scientific accuracy to decide that such a case is a toxemia? Or, take almost any of the drug eruptions—most of which develop after the ingestion of what is an infinitesimal quantity of the toxin when the total weight of the body is considered—and what inference is more absolute than that the resulting disturbance is due to the presence of the peculiar toxin? Indeed, in contrast to Dr. Turck's position, I would maintain that the determination of a toxemia can be far more accurately made from indirect evidence than can be done by a direct examination of the tissues and the fluids of the body. The position taken by him neglects the fact that the compositions of the human tissues and fluids are exceedingly variable; that we are not agreed among ourselves yet as to what are normal and what are abnormal constituents; and that the analyses made by competent investigators are often wide apart. Such being the case, I would maintain that Dr. Baldwin's determination of the existence of toxemia by inference is the accurately scientific position, and I am willing to assume the position, in contradistinction to Dr. Turck's, that a toxemia can in most cases be better established by indirect evidence than by the methods of technical examination which we have at present at our command.

Dr. William L. Baum—Since I have been one of the habitual users of the term auto-intoxication, it is perhaps incumbent upon me to come to its rescue, which has been so energetically attacked both by Dr. Sudduth and Dr. Turck. Dr. Sudduth's position in regard to auto-intoxication is an untenable one, for the reason that he leaves out of consideration the preëxisting chemic change already present, and a physiologic action may become a perverted one simply through a chemic change, and for that reason belongs to the class of toxemias or auto-intoxicants, because it is not what a patient has taken into his system that produces intoxication *per se*, but the chemic condition of the individual already present.

Dr. Turck's position is entirely untenable. A number of years ago (I think it was in 1888) in making some examinations I came across a number of reports of medico-legal cases. One of them was a case of so-called strychnia poisoning in which a chemic examination had been made by an Italian chemist. It was shown that goose meat, which had undergone putrefactive changes taken internally, produced symptoms similar to strychnia intoxication. I would like to know if perchance we were to give one grain hypodermatic injection of hyoscyamin, it would produce an intense toxemic condition, and perhaps prove fatal. How would you demonstrate either by an examination of the contents of the stomach, the condition of the blood, or of the feces that this grain of hyoscyamin is present? It only requires a small quantity of chemically altered tissue to have a physiologic action which is akin to that of some of the most powerful poisons; we know that these can produce chemic conditions of which the chemist or biologic student has no knowledge. How to look for these conditions, how to find them, is beyond the province of chemistry.

Dr. Baldwin—I have nothing to add in closing the discussion, except that it might be interesting to remark that the case I have reported went to his business on the 15th of February. He weighed himself on that day and was 109 pounds. He weighed himself again day before yesterday and was 121 pounds. He has been taking three quarts of milk a day and nine drops of arsenic.

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SECOND DAY.

Dr. Ruhräh, physician in charge of the Pasteur Institute of the City Hospital, opened the discussion on "Rabies." He spoke of the preventive treatment of rabies. This institute has been opened twelve days and has six patients. The disease is very common where there are no dog laws, but where there is a high dog tax and careful supervision there are few cases of hydrophobia. The incubation period is about ten weeks, although it can be as short as two or three. In one case it is 18 months. Deaths in three weeks are rare. Of the cases which were reported about 47 per cent. of those bitten developed the disease. Men have a greater mortality that women, and children the greatest of all. Eight per cent. of suspected cases developed. When the wound was immediately cauterized the mortality only reached 33 per cent. of the 47 per cent. mentioned above, while in the uncauterized they reached 80 per cent. In the department of the Seine mortality of hydrophobia was 25 per cent. the first year in the Pasteur institute and 16 the second year. The virus gets into a part of the central nervous system so that in preparing virus a rabbit is inoculated from a rabid dog. Pasteur's idea was to make a modified form of the disease.

Dr. Wm. H. Welch then said that in drawing conclusions it is well to remember that such a disease as hydrophobia exists. This is unquestionable. Mistakes occur but the disease has characteristic symptoms. Inoculation in animals in series is a positive pathologic proof of the existence of the disease. The state of mind has nothing to do with the matter nor the element of fear, not more than syphilophobia can cause syphilis. The method of treatment rests on a complicated experimental basis which is just as satisfactory as is the treatment of diphtheria. The best way of finding its value is by the statistical method; there is no other which is so valuable for this purpose, and thus we show that the method is efficacious. It is not a sure cure, failures occur but are not numerous. The case which dies between the time of the bite and fifteen days after the beginning of treatment should not be counted in the statistics. The percentage or mortality is from 1 to 3 or 4 per cent. Those bitten through the clothing are often not dangerous. The mortality of those bitten on the head without treatment is from 80 to 100 per cent; under

treatment, 5 to 6 per cent. From 1886 to 1895 there were seventeen deaths from bites on the head and face at the Pasteur institute, or 1.34. From 1890 to 1893, 135 persons were bitten on the head and face by rabid dogs and were treated with no deaths, not including those who died within less than fifteen days.

Dr. N. G. Keirle then explained very thoroughly how a dog was judged to be rabid both by the contents of his stomach and the bacteriologic examination of his spinal cord.

Dr. J. B. R. Purnell of Easton then made some remarks on this subject also.

Dr. C. Birnie of Tarrytown thought there was no doubt about the efficacy of the treatment.

Dr. John Morris did not believe that there were so many cases of hydrophobia, and thought that the discussion of the subject rather did harm in cultivating fear among the people. The paper was further discussed by Drs. Kemp, Goldsmith and Norment.

Dr. H. B. Jacobs then read a very elaborate paper on "Early Spinal Syphilis with the Brown-Séquard Paralysis." This was discussed by Dr. Geo. J. Preston.

Dr. J. W. Humrichouse of Hagerstown reported eight consecutive cases of laryngeal diphtheria successfully treated with intubation and antitoxin. These cases were not malignant. The membranes were small and toxic symptoms were not marked, but in every case he was obliged to perform intubation in order to avert death from stenosis of the larynx. It was the diphtheritic toxins which threatened life through the local lesions in the larynx. The mild character of the disease is due either to the type of the epidemic or to the use of antitoxin. He does not believe the cases would have done so well without antitoxin. The ages of the patients were from 16 months to 7 years. Bacteriologic cultures were not made. The small dose usually was 1,000 units and the large 5,000.

Dr. William T. Watson then read a paper illustrating the value of "Bacteriolology in Preventing the Spread of Diphtheria." Physicians are very philanthropic, doing everything possible to prevent or cure disease and thus cut off the sources of their prosperity. He related several cases in which the bacteriologic examination showed the presence of diphtheria organisms in the throats of children who were in all other respects apparently free from the disease, and therefore he had had great trouble in convincing the mother, who depended on her own efforts for her support, that she must keep each child from school and herself from intercourse with her neighbors. In several cases he found the families had become discontented with bacteriology and also with their doctor for not sooner destroying the germs. They could not understand that children who had never been ill enough to be off their feet were a source of danger to the community for several weeks. This led him to ask the question, how long the bacteria of diphtheria might remain in the throat and mouth of persons apparently well since recovered from diphtheria. In looking over the work of Dr. Herman M. Biggs of New York he found that in a large number of cases collected the bacteria were found in persons anywhere from seven days to nine weeks after recovery, and these bacteria were in many cases virulent at the longest period. He thinks that general circulars should be issued by the health authorities to parents who can be made to clearly understand the possibility of the danger on this infection after this disease.

Dr. S. K. Merrick, in discussing these papers reported a case of diphtheria in an adult 56 years old. It was a case of laryngeal diphtheria, which gradually grew worse and when the edema rendered the attack dangerous antitoxin was used. It began with a small patch on the left arytenoid. The case recovered.

Dr. T. A. Latimer has used antitoxin in thirty cases with only one death and in many instances he used it early without waiting for a diagnosis by culture tests. Further remarks were made by Drs. Gardner, W. R. Stokes, Harlan, Humrichouse and Watson.

Dr. William Royal Stokes, Bacteriologist to the Health Board of Baltimore, then read a very interesting paper on "Microscopic Examination of Milk." He briefly reviewed the methods used in the municipal laboratory in examining milk. When the milk examined was from one cow, or even when it was a mixed milk from many cows it was centrifugalized for some minutes and then the sediment was spread out on a glass and strained. If many pus cells were found the specimen was rejected; but if there was only one or two pus cells in the field the specimen was passed. Often the milk from one cow whose milk was healthy was contaminated by milk from other cows.

Dr. J. C. Hemmeter then read a paper on "Food Adulteration." He spoke first of beer adulterations and said that the beer made in Baltimore was especially free from adulterants, while the imported beer was not so good on account of the salicylic acid put in to preserve it during export. The water of Baltimore was especially good and contained very few organisms. He had examined a great many oysters and had failed to find any typhoid or pathogenic bacteria. He thought that the tidal waves of the Chesapeake Bay and lack of contaminated water kept the oysters free from a diseased condition.

Dr. Morris then said in reply that the examination of beer was not difficult.

Dr. Osler referred to the report published a few years ago in the *Lancet* on the Munich beer.

Dr. Charles O'Donovan then read a paper on "The Treatment of Gastric Ulcers after Hemorrhage." Gastric ulcers which tend to recover and in which the hemorrhage gradually decreases need no medical treatment; but those cases which recur and seem to grow worse should be treated surgically.

Dr. Samuel Theobald then reported 100 cases of "Cataract Extraction." He reviewed 100 of his consecutive cases of cataract showing his method of treatment and his results. This paper was discussed by Drs. Woods, Harlan, Randolph, Bernstein, Funck and Theobald.

At the evening session the various committees reported and the officers for the ensuing year were elected.

THIRD DAY, 12 NOON.

Dr. Harry Friedenwald read an interesting historical sketch on "The Early History of Ophthalmology and Otology in Baltimore." He said that as early as 1805 reference was made to licenses for oculists in Baltimore. Dr. Pierre Chatard, who came from France in his early life to Baltimore in 1797, was a prolific writer and contributed articles on diseases of the eye. Other writers, such as Dr. Wm. Gibson, Dr. George Frick, Dr. Cohen, Dr. Jameson and Dr. Harper show that the diseases of the eye and ear received very early attention in Maryland. In fact, Dr. Frick's book was the first to appear in English on the subject in Baltimore, and the third in the English language. This paper was discussed by Dr. Randolph.

Dr. R. L. Randolph then read a paper on "Pathologic Eye Specimens," and showed some beautifully executed water colors on the pathologic condition of the eye ground. He also showed specimens embedded in glycerin jelly according to Priestley Smith's method. This paper was discussed by Dr. Reik.

Dr. Reik then read a paper on "Exhibitions of Eye Specimens" and exhibited eye grounds mounted in glycerin jelly and showed some beautiful and normal specimens.

Dr. E. J. Bernstein then read a paper on "Prevention and Treatment of Ophthalmia Neonatorum."

Dr. R. L. Randolph said it would be interesting to hear from the obstetricians on this point.

Dr. Wilmer Brinton said that in his lying-in hospital he followed the method of Credé and in 800 cases he had 27 cases of ophthalmia neonatorum with no deaths. He rarely had occasion to use his method in private practice unless under very exceptional circumstances.

Dr. J. S. Fulton said he thought too much stress was laid on the connection between ophthalmia and gonorrhea and referred to two cases of midwives who had been fined for not reporting cases. He thought the assumption that all cases of ophthalmia in newborn children came from gonorrhea was wrong and kept many persons from making complaints.

Dr. R. Percy Smith of Sunnybrook, then read a paper on "Fracture and Dislocation of the Vertebral Column." He exhibited a case in which a heavy weight of 550 pounds had fallen on the back of a man and had both fractured and dislocated his vertebral column and injured his skull. The patient is able to go about and his recovery is remarkable.

Dr. J. E. Stokes then read a paper on "Two Cases of Anteoperative Asphyxia," which was discussed by Dr. Tiffany.

Dr. Frank Martin then read a paper on "Joint Tuberculosis Treated by Iodoform Emulsion." He reported several cases of severe joint tuberculosis on which he operated by first opening the joint, scraping off the tuberculous part and packing with iodoform gauze. The case had recovered. In answer to Dr. Taylor he said that the motion was not restored, but the fact that he had arrested the disease justified him in the operation.

Dr. Robert W. Johnson read a paper on "Two Cases of Gastrotomy and one of Gastro-enterostomy." He exhibited one of his patients entirely well. She was a young girl who had severe vomiting before the operation of gastrotomy, and that after the operation she had never vomited, and now considered herself well. In one case he recovered a long bonnet pin. This case of gastro-enterostomy died.

Dr. Hemmeter referred to this cured case as one in whom he

had used the electric light of the stomach, showing that the dilated condition of that organ extended below the symphysis.

Dr. Winslow said he had never had any success in operating for gastro-enterostomy, but he hoped to have better luck as his operations increased in number.

Dr. R. Tunstall Taylor made some remarks on the "Plaster Jacket vs. the Steel Brace," and showed five children who were undergoing treatment for Pott's disease. He thought that the plaster jacket gave good support when the curvature was below the seventh cervical vertebra; above that point the steel back brace was best. This paper was discussed by Dr. Smart.

Dr. Hiram Woods, Jr., read a very elaborate paper on "Suppurative Otitis Media with Symptoms of Sepsis and Intra-Cranial Disease," with recovery under mastoid operation and removal of polypi. He showed the importance of attending to certain running diseases of the ear which appear harmless but which in reality were dangerous.

Dr. Reik said that there was great necessity for good work in otitis media. He had seen a great many cases in which physicians had advised them to let the running ear alone. This is not right. For this reason too many cases come to the specialist too late for treatment. They need treatment early.

Dr. Hodgdon asked if there were any symptoms of meningitis.

Dr. Woods said that two cases were acute and seemed to be primary mastoid disease. This is very rare. There were no original symptoms observed, except slightly in one case where pain might have been from other trouble, but it disappeared with drainage, which does not occur in meningitis. He does not believe that these ear troubles are neglected as much as they used to be.

EVENING SESSION, 8 P.M.

"Does Medicine Advance?" This was the subject of the annual address, which was delivered by Dr. David W. Cheever, Emeritus Professor of Surgery at Harvard University. He said that the prime object of medicine was to prolong life, to relieve suffering and to prevent and cure disease. People lived longer than they used to, pain is more remediable. Many diseases can be prevented or avoided, but can we say that more sick people are cured. He then went over the various branches of medicine and gave a historic survey of the advance in medicine and concluded finally that medicine had made advances along every line. At the conclusion of this address the banquet was served.

FOURTH DAY—DAY SESSION, 12 M.

"Models of the Original Chamberlen Midwifery Forceps." Dr. J. Whitridge Williams then gave a demonstration of some models of the original Chamberlen forceps. He spoke of the early professional life of Peter Chamberlen and his son and their connection with the barber surgeons of London. By permission of the Royal Medico Chirurgical Society of London Dr. Williams was allowed to have made models of the original models of these forceps. In some the blades were connected by a piece of tape, while in others there was a mortise lock. He showed how Chamberlen tried to sell these in Paris and in Amsterdam and exhibited one pair. He called attention to the fact that there was very little difference in the shape of the blades of the forceps of the present day from those originated by Chamberlen at the end of the 16th century.

Dr. J. H. Branham then related a "Case of Complete Hysterectomy of the Uterus and Vagina During Confinement."

Dr. George W. Dobbin, Resident Obstetrician, Johns Hopkins Hospital, then related the "Frequency of Contracted Pelvis in the Obstetrical Service of the Johns Hopkins Hospital." He gave a careful record of the obstetric cases in the Johns Hopkins Hospital and showed the importance of practicing pelvimetry on all cases, without regard to any other conditions. These statistics have been of great assistance to them in their work, but allowances had to be made, from the fact that many of the cases were of the negro race.

Dr. Wilmer Brinton said that Drs. Dobbin and Williams deserved great credit for their excellent work on this subject at the Johns Hopkins Hospital. For the past three or four years he has kept account of the measurements of the cases coming under his care in his hospital and he had about three hundred measurements to report. It must be remembered that in the Maryland General Hospital 60 per cent. of the women were negroes. Of the 120 cases delivered there, three were high forceps cases, and the antero posterior measurement of all were under 4 inches.

Dr. L. E. Neale said that he thought that each case should be treated on its own merits, and that while he carefully measured each case in his own hospital he thought that a great many other conditions could be taken into account also.

Dr. J. Whitridge Williams said they simply recorded these for future work and he had no intention now of drawing conclusions, as the cases treated were too few in number. He hoped that all the members delivering women would take pains to measure their cases carefully. By this method he had discovered several cases of osteomalacia.

Dr. T. C. Gilchrist then read a paper entitled "The Common Contagious Diseases of the Skin as met with in School Children and How to Prevent Them." He said that ringworm of the scalp was one of the most frequent and dangerous diseases among the school children of Baltimore. It occurs in three forms, all of which he has found in two orphan asylums which he has lately visited. No child that has this disease should be allowed to go to school, and no child should be allowed to go to school who has dandruff or head affection unless it can be proved that ringworm of the scalp is absent. The disease is very hard to cure and not easy to diagnose. The short hairs, when the hair breaks off and little ends appear above the scalp give cause for suspicion. Another disease common among school children is pediculosis and pustular eczema. The proper treatment is to kill the nit with petroleum and the eczema will recover itself. Impetigo contagiosa is also another disease common among school children, and last of all, tinea favosa. Schools should be inspected against these diseases, and as in New York, so in other cities, immigrants with these contagious diseases should not be allowed to land. Scabies is another common disease. All these diseases are preventable and curable and should be more carefully looked after by those interested in the health of school children. Dr. Gilchrist also showed a case of pityriasis rubra and a case of alopecia areata, the latter of which was evidently, in his opinion, a case of myxedema, which he had treated with thyroid extract, 2½ grains at dose.

Dr. Micheau thinks that often children in private schools are affected by these diseases, and related a case of a child taken to be very clean and who had, in spite of every kind of treatment, a continuous case of ringworm.

Dr. Brush asked if the first case presented had any nervous disorder, as he had had several cases of pityriasis rubra in his insane asylum.

Dr. Osler asked if the hair did not always return after the use of thyroid extract. This had been the case with his experience. He also said that he thought the girl was rather young to have myxedema.

Dr. L. G. Smart asked if 2½ grains was the usual dose of thyroid extract. He always began with 5 grains and kept it up unless there was digestive disturbances. From this small dose he obtained no reaction.

Dr. Blake asked whether the falling out of the hair had any connection with the pain.

Dr. Gilchrist said, in conclusion, to Dr. Brush, that the man was not nervous, and that otherwise was entirely well. He had used the thyroid extract in 5 grain doses and had found it too large, and got excellent results from 2½ grains.

"Caries of the Skull," was the subject of a very interesting paper by Dr. H. H. Biedler. He also exhibited a specimen.

"Some Diseases of Worcester and other Counties," was the subject of a paper by Dr. J. B. R. Purnell.

"The Spread of Tuberculosis Among the Russian Jews in this City," was the subject of a paper by Dr. J. E. Gichner, who as the attending physician to the Hebrew Benevolent Society had ample opportunity to study tuberculosis among that class. He found that each year the cases of pulmonary tuberculosis seemed to be increasing very markedly, and he attributed it in part to lack of cleanliness and to the unhealthy manner of living of the people. This paper was discussed by Drs. Canfield, Schaeffer, Brinton, Micheau, Biedler, Osler, Blake, J. T. Smith and Gilchrist.

"Rupture of the Aorta," was the subject of a paper by Dr. W. G. Townsend, who showed the picture of a pathologic specimen.

"Uric Acid Diathesis in Children," was the subject of remarks made by Dr. Frank D. Sanger, who exhibited several specimens of the kidney showing uric acid alkali petris of the kidney and in the ureters.

Dr. Charles M. Ellis of Elkton was elected president for the ensuing year.

Chicago Ophthalmological and Otological Society.

Regular meeting held at the Victoria Hotel, April 13, 1897.

Dr. Montgomery in the chair.

There were twenty-one members and visitors in attendance. The minutes of the last meeting were read and approved. Dr. K. K. Wheelock of Fort Wayne was elected a member. The

secretary read the applications of Drs. A. E. Bulson, Jr., of Fort Wayne, and E. A. Lawbaugh of Chicago.

Dr. Ware showed a colored boy, 9 years of age, on whom one year ago there appeared a swelling at the outer upper angle of each orbit. These swellings increased rapidly in size, so that they became about three-quarters of an inch long, projecting forward and downward, dislocating both lachrymal glands and causing complete ptosis of both lids. The patient was first seen about a month ago and a diagnosis of specific periostitis made. Under large doses of iodid the swellings rapidly decreased, so that at present they can hardly be felt. There was no pain at any time in the course of the disease.

Dr. Colburn opened the discussion on "Muscular Asthenopia" by reporting four new cases of chorea treated by tenotomies.

The first case is a girl of 10 with a hyperphoria of 4 degrees and exophoria of 30 degrees, which was corrected by operation. Four weeks after the operation the patient was well, and has been so since.

The second case, a girl of 26, had chorea of three months. Operated on twice and cured.

The third case, a boy of 5½, which improved by the correction of 2½ D. of astigmatism, but chorea remained on using the eyes. No operation was done in this case.

Fourth case, a boy of 10, with marked degree of astigmatism, the correction of which cured the chorea.

The doctor reported four new cases of epilepsy, all of which were cured. He thinks that of the different heterophorias hyperphoria is far more important in the causation of muscular asthenopias than insufficiencies of the lateral muscles. His statistics showed a large percentage of asthenopic cases due to troubles with the extrinsic muscles, and his results have been very satisfactory.

Dr. Haight reported two cases, one with 4 degrees and the other 12 degrees exophoria, both of which were cured by operation.

Dr. Coleman had in years past operated a number of times for muscular asthenopia, but had found the results of operations so very uncertain that he had practically given it up, confining himself only to those cases that have diplopia. He found many cases in his own experience and in that of others where, after the muscular error was completely corrected, it had returned in from one to three months, and no amount of operation was able to permanently correct it. He had also found that the methods of testing for heterophoria were very unsatisfactory and uncertain.

Dr. Hotz reviewed 61 cases in his own practice, 10 with hyperphoria, 21 with esophoria and 30 with exophoria in which operations had been done with satisfactory results. He found that hyperphoria was most often the cause of symptoms. He had found that exercising the muscles after the manner of Gould was of no value in these cases.

Dr. Gradle thought that less than 1 per cent. of all cases of asthenopia had any relation to muscular troubles. He had found many people without any symptoms with marked degrees of muscular trouble. The only cases that he had thought important were those where there was what was formerly called a latent squint, but these cases did not have true asthenopia, but they have diplopia. Dr. Gradle considers that muscular asthenopia is merely an expression of one of many symptoms in a neurotic person, and he does not believe that balancing the muscles by operation is the best method of treating such cases.

Dr. Colburn, in closing the discussion, referred to the fact that it was not sufficient to test a patient's muscles with the eyes directed straight ahead. It was of great importance in many cases to test the muscles with the eyes in a different position.

On motion, the Society adjourned.

C. P. PINCKARD, M.D., Secretary.

SELECTIONS.

Amebic Abscess of the Liver, with Perforation of the Inferior Vena Cava.—Flexner (*American Journal of the Medical Sciences*, May, p. 553) reports two cases of amebic abscess of the liver, together with the only other one that he was able to find recorded in the literature, in which secondary perforation of the inferior vena cava resulted. One of the cases occurred in a man, 51 years old, in whom the diagnosis lay between abscess and neoplasm of the liver, with a leaning in favor of the former. An exploratory operation was undertaken, but it was not until the aspirating needle was introduced in the right sixth interspace in about the anterior axillary space, passing through the diaphragm and about 5 cm. of the liver substance, that it entered a cavity from which about 20 c.c. of a brownish pus-like fluid, having the appearance of anchovy sauce, was evacuated. Portions of the sixth and seventh ribs were resected, the pleural cavity shut off by means of gauze and the diaphragm incised, and the peritoneal cavity protected in like manner. On the following day the liver was incised and between 1000 and 1500 c.c. of fluid similar in appearance to that aspirated evacuated. A large drainage tube was introduced and the wound was packed with iodoform gauze. The patient did well for eleven days after the second operation, when there occurred a copious hemorrhage into the wound and death soon resulted. Examination of the fluid aspirated on the first day showed no well preserved cells, but only granular débris. In the contents of the abscess evacuated at the operation were found a number of actively motile bodies with the characteristics of the ameba coli.

Postmortem examination disclosed in the right lobe of the liver a funnel-shaped cavity near its anterior edge, 5 cm. from its superior border. In its widest part this cavity measured 4 cm. in diameter, and led directly into a cavity in the substance of the right lobe of the liver the size of an orange. This second cavity at its deepest part measured 10 cm. in its greatest diameter. Across its upper portion ran the inferior vena cava, and at a point 2 cm. from the superior border of the liver it was occupied by a thrombus that half-filled its lumen. On removing this thrombus two perforations, one the size of a split pea, the other of a poppy-seed, were disclosed, leading directly into the cavity in the liver. For a distance of 5 cm. the adventitial coat of the cava was in contact with the abscess and assisted in the formation of its posterior boundary wall. The right lobe of the liver contained numerous additional abscesses of varying size. The intestines were free from ulceration, but several pigmented and depressed spots were present in the large intestine; and in the ileum, about 50 cm. above the ileo-cecal valve, there was a puckered area 1 cm. in diameter. Microscopic examination of sections from these parts showed, however, the normal structure of the mucosa. No evidence of previous ulceration was made out. Each lung contained an embolic abscess. Examination of the fresh contents of the abscess at the autopsy showed living amebæ in moderate numbers. Several varieties of bacteria were also present. The smaller abscesses and necrotic areas contained streptococci in pure culture. The pulmonary abscesses also were of streptococcus origin.

The second case occurred in a man, 45 years old, who had had recurring chills and fever, followed by profuse sweating. Subsequently cough developed, with blood-streaked expectoration, which later assumed the appearance of anchovy sauce and contained, in addition to pus cells, red blood corpuscles and epithelial cells, distinctly motile amebæ and crystals believed to be bilirubin. The fecal matter obtained by the rectal tube did not show amebæ. There was no history of dysentery. While under observation the patient was seized with sudden pain on the right side and immediately complained of dyspnea and oppression. Fulness and immobility of the right chest were noted on examination, with increased vocal fremitus and percussion flatness. Resection of the sixth rib on the right side permitted of the evacuation of a large quantity of pale-brownish pus. Subsequently amebæ were found in the discharges obtained by means of the rectal tube, and later diarrhea set in. The patient, however, grew progressively more and more feeble and death took place.

Upon postmortem examination the right lobe of the liver was found to contain a large abscess communicating directly, through the diaphragm, with a cavity in the lung. The abscess was bounded posteriorly, in addition to the thickened capsule of

the liver, by the adventitial coat of the inferior vena cava, into which it had ruptured at the point of entrance of the hepatic veins. The cava, beginning at a point just above the rupture, contained an occluding, partly decolorized, firm and adherent thrombus, which extended upward and projected into right auricle, about one-third of which it filled. Some of the main hepatic veins contained thrombi, which were firm and decolorized in the upper and red and soft in the lower portions. The small intestine showed only congestion and a few small areas of ecchymosis, chiefly in the mucous membrane. The large intestine, on the other hand, was the seat of many ulcers, which for the most part did not reach the size of a bean. They were in the mucous membrane or at most projected very superficially into the submucosa. They were quite regular and smooth, not undermined, and were covered with a sticky pus-like material. The majority were in the cecum and upper colon; they were fewer and well separated in the sigmoid flexure and rectum. The fresh material taken from the abscess common to the liver and the right lung contained many living amebæ. The left lung contained many small abscesses, presumably of embolic origin, and the left lobe of the liver two or three, of which none was larger than a split pea. In none of these were amebæ found. They, as well as the large abscess, contained cocci in clumps. Bacteriologic examination revealed the presence of staphylococcus pyogenes aureus in these situations, as well as in the blood of the heart and organs generally.

It is pointed out that the special features of interest in the cases reported are the existence of an amebic abscess of the liver in the first in the absence of intestinal lesions, and the probability in the second of the intestinal lesions being secondary to the hepatic and pulmonary abscess, perhaps through the biliary passages and the bile.

Surgical Significance of Gallstones.—Dr. F. Lange, before the Johns Hopkins Hospital Medical Society, offered the following as the outgrowth of a large experience in the treatment of hepatic calculus. In operating, his preferences have led him to entirely abandon the longitudinal incision, but, according to the proposition of Corvisart and the experience of other surgeons, as reported in the *Hospital Bulletin*, he further said, "I do exclusively the operation parallel to the border of the ribs. Correspondingly to the thickness of the abdominal wall, this incision must occasionally be a very large one. A very great difficulty must occasionally be met with through the smallness of the liver. It is a mistaken idea that in consequence of stagnation of bile the liver must be enlarged. On the contrary, I have had the experience that in occlusion of the common duct of long duration, probably through the influence of pressure, an atrophic condition of the liver tissue will take place, and occasionally the liver will be concealed high up behind the ribs and this may cause a great deal of difficulty in consequence of the high and deep position of the field of operation. I have taken, in eight of these cases, to excising the adjacent cartilages of the ribs, and I should like to commend that. It faciltates the operation very much. On the other hand, the enlargement of the liver may be a great hindrance, and, especially in fat and plump persons of short build, it may be quite difficult to get down to the common duct. In one of the cases I was unable, in spite of the excision of the ribs, to get effectually down to the point of the trouble, and not until I had pulled the liver as far as I could out of the incision, almost one-third of the liver substance being brought outside of the abdominal wall, was I able to easily get to the cystic and common ducts. It was the case in which I was obliged to open the cystic duct at two different points and, besides that, the common duct at the usual place about the middle of its course. In the cases of acute inflammation it is necessary, wherever one has reason to presume that the neighborhood of the gall bladder is infected, to keep everything as much as possible open and give entirely free outlet for the peritoneal secretions. At the same time I always drain the gall bladder with a long tube with the view of having a siphon action upon the secreted gall, and this will act very effectually. Occasionally a blockade will take place through mucus or blood clot, and then it will be necessary to change the tube or make a cautious washing through it. I should advise against the injection of any irritating antiseptic solution into the gall bladder. I have observed that occasionally this fluid will cause distressing symptoms, attacks of colic, probably because it may get into the common duct and the hepatic duct and irritate. I only use saline solution or boiled water. I have always found that the bile itself was an antiseptic agent. After a short time the amount of purulent secretion is insignificant, and the healing of the abdominal wounds, although constantly in contact with the bile, is mostly uneventful and without any untoward symptoms.

"About stones in the liver substance I have no practical experience. I have once found a stone in the liver after it had perforated the walls of the gall bladder, but I have not had any experience with stones in the liver that have formed in the gall system above the hepatic duct. It is a fact that these stones will occur, that occasionally quite extensive casts of stone formation will take place in the gall system. I will not mention comparatively frequent uncomplicated cases, where we have to deal with dilated gall bladders and stones, and where the surgical treatment is comparatively simple. I never do the operation in two sittings. I find that it is entirely safe to operate in one sitting. I have always aspirated as much as possible the contents of the gall bladder through a thick aspirating needle, protecting as cautiously as possible the surroundings to guard against infection.

"I think that in some of my cases I have reason to assume that there is some valve action, especially in one case of stone in the common duct of small size. The patient had had an attack of gallstone some three months before this attack with jaundice lasting several weeks, most likely because of obstruction from this stone, which was solitary, as judged by its very round, regular shape. Probably after a time this stone shifted back and later on again caused obstruction together with an infection. This we saw not uncommonly in cases of obstruction of the common duct. Even if the stones are ball-like or rounded, at intervals a certain amount of bile will get into the gut. It is almost characteristic that if, in prolonged jaundice, at intervals the condition of the feces and the urine points to the passage of a certain amount of bile through the duct, we have probably to deal with obstruction from stone. Regarding the drainage of the common duct I have tried everything; I have left the duct entirely opened, and I have sewed it up with the insertion of a small drainage tube into the lumen of the duct, and I have sewed it up entirely. In cases where the common duct is healthy I think it preferable, if it can be done, to sew up the duct entirely. If there is reason to assume that there is obstruction beyond the stone I should prefer to drain, and I do this in such a way that I insert a small drainage tube from the wound in the common duct and pack gauze around it. This gauze (iodoform gauze boiled in glycerin) I leave in for five or six days. The tube I leave for a sufficiently long time to secure the proper outlet of any secretion as long as it exists. In draining a gall bladder I pack the gauze around the tube and leave the opening comparatively large for the reason that, at least the inflammatory cases, the surface of the gall bladder is such that it will necessitate some thorough cleansing and local treatment for a limited time. There will be clots of blood or shreds of tissue or inspissated mucus which might easily obstruct. I mostly remove this tampon in two or three days, and give the inside of the gall bladder an additional thorough washing and cleansing. Besides this we have either sewed the peritoneum to the

surface of the gall bladder where there is no infection outside of it, or we have packed around the circumference of the gall bladder in such a way that even if some of the contents of the bladder escape it is not likely to cause a spreading inflammation. A very serious complication that has led to fatal issue in several of my cases of advanced cholemia, is an inclination of the patient to bleeding. Three of my cases I have lost from secondary hemorrhages. Two of these cases were complicated with malignant disease of the pancreas. Necropsies were not made, and I can only say that I felt in the region of the head of the pancreas a resistant hard mass which I took for a malignant affection. Lately, Professor Riedel, a surgeon who has perhaps worked more in gall surgery than any other man living, has published cases in which he is inclined to assume that occasionally these apparent malignant thickenings of the pancreas may be but inflammatory thickenings, and he mentions one case which seems to be beyond any doubt. In an elderly gentleman, in whom the operation was abandoned, assuming that this was a case of cancer of the pancreas, the stones merely were removed. A fatal issue was awaited, but the patient lived for years and became healthy and strong, and there could be no question about his not having malignant disease. He assumes that through the presence of stones an irritation is kept up in the pancreas, and that this irritation, after the removal of the stone, may cease and the condition improve. I have lost one of these cases by the separation of the Murphy button after establishing cholecystenterostomy. The patient had had up to that time small hemorrhages from the inside of the gall bladder. I had purposely kept the gall bladder open, stitched to the abdominal wall, because I had the impression that this would probably be a case of bleeding, and in order to tampon and make counter pressure I kept the gall bladder open and was able up to the tenth or eleventh day to check the bleeding, but after the separation the patient had a profuse hemorrhage into the large intestine and succumbed to anemia."

PRACTICAL NOTES.

A Sensitive Test for Sugar.—A test tube of ordinary size is filled for about half an inch with hydrochlorate of phenyl-hydrazin in powder; then acetate of soda in powder or small crystals is added for another half inch. The test-tube is then half filled with urine and boiled over a spirit lamp, the powders passing into solution as soon as the liquid is heated. After the urine has reached the boiling point allow it to boil for two minutes. The tube is left in the stand, and examined again some time afterward. If sugar is present a yellowish deposit forms, which under the microscope is seen to consist chiefly of beautiful needle-shaped crystals of a bright sulphur yellow color. The crystals are often found after the urine has been standing for half an hour; but after boiling the tube we have generally placed it in the test stand, and not examined the deposit until at least six or eight hours afterward. If no sugar is present, only brownish amorphous globules or yellowish scales are found. The test when thus carried out is very sensitive; a diabetic urine so diluted with water as to contain only 0.015 per cent. of sugar gave no reaction with Fehling's solution and no indication of sugar by the fermentation test, but with the phenyl-hydrazin test showed a distinct deposit of long yellow crystals.—*Dublin Journal of Medical Science.*

Successful Suture of a Penetrating Wound of the Heart.—At a recent meeting of the German Surgical Society Rehn (*Deutsche med. Woch.*, May 6, 1897, Suppl. p. 88) reported the case of a man 22 years old who was stabbed with a knife in the left chest and came under observation in a most unfavorable condition, with dyspnea and cyanosis, almost pulseless and covered with blood. A wound was found in the left fourth intercostal space. The area of cardiac percussion dulness was increased to the right; the heart-sounds were clear. On the following day the condition of the patient had improved, but the area of cardiac dulness had increased. On the third day the condition had grown worse, the pulse failing and the respiration becoming greatly accelerated. The area of cardiac dulness had increased still more and the patient appeared moribund. Operation was now decided upon and an incision was made in the fourth intercostal space, the fifth rib also being divided, and the pericardium exposed. When the wound in this sac was enlarged a large clot was encountered and an incised wound of the right ventricle 1.5 cm. long was found. No blood escaped during systole and it was possible to compress the wound with a finger without embarrassing the action of the heart. Three silk sutures were introduced during diastole and the hemorrhage ceased. The pleura was irrigated with saline solution and together with the pericardium packed with gauze. Immediately after the operation pulse and respiration were better. The surgical progress of the case was complicated by purulent pleurisy necessitating later reopening of the pleura. Except for slightly increased activity of the heart the condition of the patient was an excellent one seven months after the accident.

Plaster Bed for the Treatment of Scoliosis.—Jagerink has secured gratifying results with his plaster bed in treating twenty patients, mostly adults, some 25 years old, all with advanced scoliosis. They sleep in this bed all night and remain in it several hours a day. The plaster cast reaches from the top of the head nearly to the knees and is strengthened with iron bands. A slit is cut on each side of the spine corresponding to the points of the greatest curvature, through each of which a broad band is passed and fastened to an iron support projecting a foot or two above each side. These flat bands are gradually tightened until they exert considerable pressure upon the curvatures, while the head of the bed is raised, which stretches the spinal column. Full directions and cuts are published in the *Ztschrft. f. Orthop. Chir.*, Vol. v, No. 1, in which he recommends it in the warmest terms.

Lucas' Balloon Dilator for the Cervix Uteri is an hour-glass shaped balloon of inelastic and very strong rubber tissue distended with water. The concave top of the balloon receives the head and its pressure deepens the concavity, as the water within is forced by the pressure out into the other part in the vagina. This is considered an important advantage of this balloon as it favors correct presentation and does not alter it, which is one of the dangers of the Champetier balloon. Lucas believes that it will be found extremely useful in cases requiring prompt evacuation of the contents of the uterus, also in hemorrhage from placenta previa and in deformed pelvis.—*Jour. de M. de Paris*, January 31.

Success of Osmic Acid in Neuralgia.—Franck reports thirty-four cases completely cured in seventy-seven, some truly remarkable cures after years of suffering and the failure of other remedies and surgical intervention. He uses Chapiro's formula: Osmic acid, 0.1 gram; aq. dest., 6 grams; glycerin, 4 grams. Keep in black flasks. Usual amount injected, 0.01 gram.—*Nouv. Remèdes*, February 8.

Test for Peptone in the Urine.—As trichloracetic acid precipitates the albuminoids, a concentrated solution of trichloracetic acid added to an aqueous solution dissolves the albuminoids, while the peptone remains on the filter undisturbed. The addition of copper sulphate to the peptone residuum then produces the typical biuret reaction.—*St. Petersb. Med. Woch.*, No. 4, 1897.

Value of Somatose as an Anti-Emetic.—Lutaud calls attention to the peculiar and powerful anti-emetic action of somatose, with which he has promptly controlled a number of cases of rebellious vomiting in pregnancy, and prevented vomiting after chloroform narcosis. He adds that there is apt to be diarrhea when more than four teaspoonfuls a day are taken.—*Jour. de Méd. de Paris*, April 18.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:

Per Annum, in Advance $5.00
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SATURDAY, MAY 29, 1897.

THE OCCASIONAL EXCITANT ACTION OF THE BROMIDS.

The occasional untoward effects of the bromids, especially in certain epileptics, which were the subject of editorial comment in the JOURNAL last year at the instance of a paper read by Dr. S. WEIR MITCHELL, were again brought up before the Association of American Physicians at their recent session at Washington. Dr. H. A. HARE read a paper giving the results of inquiries made by him, in which he stated that these effects were well known to asylum physicians generally and that there already existed a considerable literature upon the subject. In the discussion doubt was apparently thrown upon the statements he had gathered from asylum physicians, which were held to have an insufficient basis; the bromid merely diverted the attack, it was hinted, but did not cause it, and presumably the idea was intended to be conveyed that its connection with the violence it was said to induce did not really exist.

It is not an important matter whether the bromids act by suppressing the ordinary outlet of the irritability in the fits or by some special excitant action of their own in particular cases, or whether the effects apparently due to the drug are caused by individual idiosyncrasy or not; the real question is, are they the result of its administration? As to this there seems little doubt, though the fact has been ignored or overlooked by some very prominent neurologists. This is the more remarkable when it is known that these effects were mentioned in one of the earliest elaborate studies of the action of the drug, that of VOISIN, who reported several pronounced cases of bromid mania. It was later noticed expressly or incidentally by ECHEVERRIA, HAMMOND, STARK, and others, and in a discussion in the American Neurological Association, in 1881, Dr. J. S. JEWELL suggested the possibility that a certain proportion of the epileptics in asylums probably owed their commitment to attacks due chiefly or entirely to the administration of bromids, and Dr. SPITZKA expressed the opinion that 25 per cent. of them were thus liable. There seems to be very little doubt as to the accuracy and thoroughness of the earlier observations, and the very general recognition of the phenomenon by asylum physicians is corroborative. It appears to be a clinical fact that has been recognized by alienists in this country, while it has been overlooked both in observation and in the medical literature by some very prominent specialists.

Most of these instances of the evil effects of the bromids have been observed in cases where the potassium salt was employed, but whether there is any essential difference between them as was suggested in the discussion of Dr. HARE'S paper is a yet unsettled question. There is some reason for the belief that it is the drug and not the suppression of the epileptic attacks which it induces, thus cutting off the natural outlet of the nervous irritability, which is responsible, at least in some cases. There is also evidence and a general probability that with moderate doses these effects are rare with any of the bromid salts; and that their lack of observation of late years may be due to the excessive bromid medication formerly employed. There is still, however, room for caution in regard to the administration of these very valuable agents, which when given in excess or injudiciously employed are by no means altogether harmless drugs. It is well that such a high therapeutic authority as is Dr. HARE, has taken up this subject and given his findings to the profession.

PROFESSIONAL INCOMES.

The average annual income of a metropolitan lawyer has been quoted as being $800, but the *New York Herald* of May 16, makes that of the "Gotham" physician to be $1,630. One who possibly may have inspired the interview stated in the article that his practice brought him $10,000 each month, while another with a much clearer conscience said he was happy when he received $100 in the same time. For prudential reasons both these unnamed brothers under the ægis of "the Code" teach us nothing of their money-making methods, and thereby incur none of the risks of that "competition" just now so much talked of by politico-economists. With the accord of modesty to the poorer exemplar let us think of an

income of $120,000 a year with the long line of office patients jostling over each other at $10 per somersault, and then be deaf to the coarse imprecations of the baffled tax-gatherer who ever flits through the "borough of Manhattan."

Verily we can not believe that our sister city, whom we always sincerely respect, can spare enough from the throngs about her well-appointed charities to support a medical prodigy who has so opened his books to a voluntary receiver. We confess to the view usually entertained by the biographers of rich physicians that more is due to "judicious investments" than to adroit advertising. Moral: Let us avoid the shoals of commercialism and enjoy the peace of the country practitioner who can steal a day or two for the philosophies of life beyond ear-shot of the "dull and sickening thud" of statistics such as these. Meanwhile let us not forget that our brother with so fashionable a practice may be posing before a glass for a grander rôle in the near future. He may prove to be a Paracelsus with much trimmed abilities.

THE MEDICAL TEMPERANCE ASSOCIATION.

This Association of medical men, whose special purpose is the study of alcohol and its effects on the body, hold their annual meeting in Philadelphia at the same time as the AMERICAN MEDICAL ASSOCIATION. Organized six years ago with Dr. N. S. DAVIS of Chicago, as president, and composed entirely of members of the AMERICAN MEDICAL ASSOCIATION, they hold an annual meeting for the election of officers at the same time and place. For several years they have read papers on the alcoholic question in the different Sections of the MEDICAL ASSOCIATION. For three years the Section on State Medicine has welcomed them. Some of the members have read papers in the Sections on Practice, Neurology, and Surgery, and the impression and interest created has been excellent. No moral or ethical side is discussed, and the topics are purely scientific and medical. This Association has grown to nearly a hundred and fifty members, all of whom are interested in the study of alcohol as a medicine and food, and who are trying to ascertain the facts as they appear to each one personally and in their separate fields of practice.

An English association, called the British Medical Temperance Society, has been organized for over twenty years, with the same purpose and plan, and composed entirely of members of the British Medical Association. They have an annual breakfast, and discuss alcohol at the table freely and frankly. Leading medical men attend these breakfast occasions, and speak for or against alcohol as a medicine with great freedom. This Society now numbers over five hundred members, and is considered an important annex to every meeting of the British Medical Association. The American society has not been able to rouse up so much personal interest in the profession, and yet by its numerous papers every year, the subject has been kept quietly before the profession. Many physicians not members of this Association seem anxious to hear all the papers read, and some very interesting discussions have followed the reading of these papers.

The committee of fifty organized in New York a few years ago for the investigation of the alcoholic question, has followed some of the same lines marked out by this Association, and with much boasting reached the same conclusions. The impression has been created that they were doing the only real scientific work in this country. Most of these papers read in the Sections of the ASSOCIATION have appeared in the JOURNAL and have passed unobserved, except by those interested.

The sneers of some wise persons who thought this subject settled beyond further question, at this Association "as a set of cranks" unworthy of notice, have not been heard lately. In reality the medical side of the drink problem is as urgent and important a topic in medicine as any other. We shall never be able to understand it until the entire profession takes it up seriously, and studies it as this Association is doing, by short papers on the clinical aspects of alcohol in every-day observation.

The annual meeting will be held in the hall of the Section on State Medicine on Thursday, June 3. Dr. CROTHERS, of Hartford, Conn., is the secretary.

SYSTEMATIC COLD BATHING IN THE TREATMENT OF TYPHOID FEVER.

In his oration delivered on the occasion of the recent unveiling at Washington of the monument of the late Prof. SAMUEL D. GROSS, Dr. W. W. KEEN, in contrasting the numerous statues erected to the memory of statesmen and warriors with the few erected to honor the memory and the services of medical men, opportunely pointed out that "peace hath her victories no less renowned than those of war." In exemplification of this fact we need but refer to the conquest of smallpox through vaccination and to that of diphtheria by the antitoxin. There died recently in the seclusion of his home in Germany a modest provincial practitioner of medicine to whom the world owes a debt of gratitude of which it appears scarcely to be cognizant. For more than thirty years ERNST BRAND of Stettin labored zealously and unselfishly in deed and in word for the systematic employment of cold bathing in the treatment of typhoid fever and he was fortunate enough to live sufficiently long to enjoy the reward of seeing the principles he advocated and the methods he recommended adopted throughout the whole civilized world, with the result of saving from five to ten lives in every hundred submitted to the therapeutic measure that bears his name.

One may search in vain through the pages of history for the names of greater benefactors of their race than those of JENNER, of BEHRING and of BRAND. The time has happily passed when the prophylactic value of vaccination, the utility of the cold-bath treatment of typhoid fever and the therapeutic efficacy of the antitoxin of diphtheria could be made subjects of discussion. Each of these agencies has been established upon a foundation so strong as to be secure from attack by fanaticism and ignorance. The results obtained in the German and French armies from systematic cold bathing in the treatment of typhoid fever and the favorable statistics reported by HARE from Australia, as well as by numerous clinicians in various parts of the world, have done much to surround with confidence a measure that often seems cruel, sometimes unnecessary and occasionally harmful. In the United States BARUCH in especial deserves commendation for his persevering and consistent advocacy of the cold-bath treatment, while WILSON and OSLER have shown its value in hospital practice and SIHLER its practicability in private.

Among the largest individual statistics contributed to the now very considerable literature upon the hydrotherapy of typhoid fever are those of HARE of Australia, who now publishes (*Medical Record*, May 8, 1897, p. 656) the figures from the Brisbane Hospital for a period of fifteen years, during the first five of which so-called expectant treatment was employed in the treatment of cases of typhoid fever and during the remaining ten systematic cold bathing according to the method of BRAND. These statistics show that from 1882 to 1886, prior to the employment of cold bathing, there were among 1,828 cases of typhoid fever 271 deaths, a mortality of 14.8 per cent. The highest mortality in any year of this period was 17 per cent., the lowest 13.3 per cent. From 1887 to 1896 cold bathing was employed systematically and there were treated 1,902 cases, with 143 deaths, a mortality of 7.5 per cent. The highest mortality of any year of this period was 11.6 per cent., the lowest 1.3 per cent. The mortality was thus just halved. Omitting the cases treated during the first six months of this period, when the method was but imperfectly carried out, there were 1,731 cases extending over a period of nine and a half years, with 122 deaths, a mortality of scarcely more than 7 per cent. Dividing these cases into three equal groups of 577 each, the mortality was respectively 7.5 per cent., 6.9 per cent., and 6.9 per cent. Among the whole 1,902 cases 56 deaths were due to intestinal perforation, 2.9 per cent.; 23 were due to intestinal hemorrhage, 1.2 per cent.; and 64 were due to other causes, 3.1 per cent. As compared with the statistics of previous years these figures show no noteworthy change in the proportion of deaths due to intestinal hemorrhage and perforation, while the reduction in the mortality in consequence of bathing is due to a diminution in the number of cases fatal from causes other than perforation and hemorrhage.

Under expectant treatment the mortality had been higher among females than among males, while under the cold-bath treatment this relation was reversed. The foregoing statistics include all cases of typhoid fever admitted to the hospital during the period specified, independently of the gravity of the case and of the plan of treatment pursued, and thus they exhibit the results secured in the most unfavorable light possible. The facts here briefly narrated surely require no elaboration. They are eloquent in their suggestiveness, and none will gainsay the justice of the claim that the man who devises the means of saving an additional seven of a hundred threatened lives is deserving of the gratitude of his fellow-men during life and of having his memory perpetuated in tablet of bronze or carving of stone equally with the greatest military commander, the most distinguished inventor or the most intrepid discoverer.

QUININ A HARMFUL REMEDY IN MALARIAL HEMATURIA.

Considering the very frequent occurrence of that alarming complication of malarial infection, malarial hematuria, in certain parts of the United States and its study in these regions as carried out by capable practicing physicians (and also in Greece where this symptom is also commonly met with), it is a remarkable fact that the writers of text-books and "Systems of Medicine" are able to give us so little information concerning the disease from a pathologic standpoint and that they persist in recommending the use of quinin for its relief. A lack of knowledge of the pathologic process underlying this condition is perhaps the excuse for this distinctly erroneous and harmful therapeutic statement. Doubtless in the majority of instances the author of a text-book, or article in a "System," simply quotes the mistake made by a previous writer and so perpetuates the error. Of the recent writers who commend the use of quinin in malarial fever may be named LOOMIS, who states that quinin is indicated in all forms of paroxysmal hematuria or hemoglobinurina; and TYSON, who believes that if quinin does not stop a hematuria that the hematuria is not malarial but due to other causes; and we find in the last edition of FLINT'S "Practice," edited by HENRY, the use of quinin is urged in this affection. In the editorial additions of F. C. SHATTUCK to STRUEMPELL'S "Practice" the statement is made that the hemorrhagic form of malarial fever "demands cinchonism." Finally in THAYER'S admirable article on malarial fever in the "American System of Practical Medicine," edited by LOOMIS and THOMPSON, this author, while recognizing the fact that some persons have protested against the use of quinin in malarial hematuria, lends his influ-

ence to its use by saying that this adverse view, "is not held by the majority of observers." If he had said writers instead of observers, his statement would be correct, but the majority of *observers* are arraigned against this use of quinin. A review of the journals which represent the views of southern practitioners will reveal the fact that the most of them assert the harmfulness of quinin in such cases and of those who condemn this plan of treatment may be mentioned MEEKS, who writes in the *Therapeutic Gazette* for May. In this article, written by a physician of large personal experience with this affection, the injurious effects of quinin are emphasized. His conclusions are supported in this country by a collective investigation carried out by HARE in 1892 and published in the same Journal for July of that year. Thus out of 155 replies sent out to discover the views of physicians residing within the area shown by the United States Census to have a mortality of over seventy per cent. HARE found 19 experienced physicians who regarded quinin as useful in malarial fever and 28 who considered it harmful, while 12 experienced physicians believed it to cure malarial hematuria 27 asserted that this drug was capable of producing this symptom. PLEHN in the *Deutsche Medicinische Wochenschrift*, 1895, Numbers 25, 26 and 27, asserts that quinin will produce hematuria in many cases of malarial fever and that cases of malarial hematuria treated without quinin recover more rapidly than those who receive this drug. These statements are strongly supported by earlier writers than those just quoted, particularly in Greece where malarial hematuria is remarkably commonly met with. Thus KARAMITSAS of Athens has recorded seven cases of this character, the patients consisting of one female and six men. These cases he had under his personal observation and he records others reported to him. Two of his patients were medical men and he was able to produce hematuria in them again and again by the use of quinin. It is a notable fact that these patients did not have hematuria in the malarial attack if quinin was withheld. RIZOPOULOO asserts that the use of quinin in some cases will give rise to all the signs of a bilious hematuric malarial fever. TOMMASELLI has recorded similar cases. PAMPOUKIS and CHOMATIANOS also record cases of hemoglobinuria in persons both non-malarial and malarial and caused by quinin.

The following cases reported by KARAMITSAS also show that hematuria may be produced in an attack otherwise non-hematuric by quinin.

The patient, after irregular meals, arose October 14 with much anxiety, a headache and slight lumbago, but without fever. Two hours after noon some fever came on, with slight chills. The temperature rose toward evening to 38 degrees C., the pulse to 100; the tongue was a little dry, and covered with a white coating; there was thirst, heaviness of the cardia, headache, especially in the frontal region. They gave him soda lemonade. About two hours after midnight the fever diminished, the temperature became 37.5 degrees, but the other symptoms remained in the same condition. In the morning (October 15), as the patient had no evacuation for two days, he was given a decoction of tamarinds with manna, which was followed by evacuations. The temperature toward noon was 37 degrees; except for extreme lassitude, the patient felt no other discomfort. Three hours after noon came a fever without chills, more severe than the day before. The temperature rose little by little to 39.5 degrees. Insomnia and fever existed during the entire night. About three hours after midnight the temperature descended to 38 degrees; then the patient began to take quinin; he took, up to seven o'clock in the morning, 20 grains, 5 grains an hour; an hour after the first dose, he felt much weakness, heaviness, with pains in the lumbar regions, and a desire to urinate. He passed shortly after copious urine of a red-black color. Let us observe that during the paroxysm and before having taken the quinin, there was ordinary febrile urine.

The weakness became still greater, also the painful heaviness in the lumbar regions. Two hours after having taken the lost dose of quinin, he had again bloody urine. For twenty-four hours his urine always presented a red color, but little by little it became lighter and less bloody, and the morning of October 17 had a normal color. The patient felt no indisposition save weakness. He was very pale, and his conjunctiva was during two days of a yellowish color, which disappeared little by little.

Aside from the fact that nearly all Greek writers of today believe the malarial poisoning renders the patient peculiarly susceptible to the hematuric influence of quinin, additional evidence can be adduced showing that quinin is harmful in the great majority of cases of malarial hematuria. In the first place the drug is never given except in very full doses in this affection and these doses are capable of irritating the kidneys, which, in many cases of acute malarial infection, are acutely inflamed, and in chronic malarial disease are generally seriously impaired in their functions. In this connection reference may be made to the valuable research of ATKINSON of Baltimore and the researches made by the Tri-State Medical Society of Alabama, Tennessee and Mississippi, which found nephritis in all cases of fatal malarial hematuria.

RALFE states that renal changes undoubtedly occur, although in some instances these may be due to cold and damp rather than the malarial poison, and ATKINSON has shown that malarial nephritis is tubal and diffuse, and that the inflammation is most marked in the neighborhood of the glomeruli. KIENER and KELSCH also describe a hemoglobinuric hyperemia as occurring during an acute attack of ague in which the

organs are intensely congested. The cortex is cloudy from blood-coloration, the glomeruli are prominent and red, and the pyramids redder still. Finally, in this connection we may cite the facts stated by THAYER as follows:

The grave damage which the kidneys may suffer in certain acute malarial infections, either from the direct action of some toxin produced by the hematozoa or from the presence in the circulation of injurious substances, due indirectly to the action of the parasite, is most strikingly brought to one's notice in the intense acute nephritis which may follow malarial hemoglobinuria. The kidney, however, rarely escapes a certain amount of damage in any severe malarial infection. Thus, out of 284 cases analyzed by HEWETSON and the author, albumin was found in nearly one-half, while severe acute nephritis was present in 4 instances. The nephritis following malarial fever is usually a mild acute, diffuse process similar to that observed in any infectious disease. In some instances, as stated in the section on malarial hematuria, the course may be rapid and fatal; in the majority, however, the prognosis is favorable and complete recovery occurs. It is not impossible that, in some instances, a fatal chronic diffuse nephritis may owe its origin to the malarial poison; however, definite proof of this is as yet wanting. There is nothing absolutely characteristic, clinically or pathologically, in these instances of malarial nephritis.

GUYOCHIN (*Action Physiol. et Thérap. de la Quinine*, Paris, 1872) has reported cases of genito-urinary irritation after the use of quinin, and FAGINOTI reports a case in which there was pain in the urinary passages, and the discharge of a few drops of blood on urination. MONNERET has seen positive hematuria follow its use, and RIVET (*L'Union Médical*, Nov. 1, 1884) has observed vesical spasm and hematuria after an ordinary dose of the drug. DASSET (*Bulletin de Thérapeutique*, xv, 248) reports the development of hematuria with retention of urine from cystic irritation due to quinin; and CACHERE (*New Orleans Journ. of Medicine*, October, 1869) records two cases in which hematuria followed the use of quinin. One of these, a boy of 13, had profuse hematuria after the dose of 10 grains, and a girl of 7 years was affected similarly whenever quinin was used. STILLE states that quinin irritates the urinary organs and if any part of this tract is diseased, the disease is aggravated.

An argument which may be well adduced in support of the use of quinin in malarial hematuria is the fact that this drug is undoubtedly a specific for the cure of ordinary malarial infection by reason of its destructive effect on the plasmodium. While at first sight this reasoning is cogent, in reality it is not so, for the hematuria is the result of a pathologic process produced by the infection and arises either from the sudden setting free of large amounts of hemoglobin in the blood or because of degenerative vascular changes in the kidneys. To give quinin therefore to relieve an attack of malarial hematuria is to "lock the door after the horse is stolen" and its use will give the engorged and over-worked kidneys only the additional labor of eliminating the drug. If quinin is used at all in such cases it should be used as a prophylactic against future attacks and be given after the hematuria has passed by.

To denounce the use of quinin and offer no other plan of treatment is not the intention of this editorial. The use of copious draughts of pure water to flush the kidneys, hot applications to the loins, chloroform spirit given internally and the use of purgatives to unload the bowels and relieve the liver are indicated. Further, it was proved by the collective investigation of HARE, already referred to, that hyposulphite of sodium is to be regarded as a most useful remedy in the dose of 20 to 40 grains every four hours. A calomel purge is universally recognized as useful and tincture of the chlorid of iron seems to be of value if clinical reports can be relied upon.

PRESIDENT McKINLEY WILL ATTEND.

We are advised by Dr. HOBART A. HARE, Chairman of the Committee of Arrangements, that President McKINLEY has formally accepted the invitation to visit the meeting of the ASSOCIATION and will be present Wednesday morning. To prevent crush all members must show registration cards at the door for admission.

THE JOURNAL SPECIAL TRAIN.

Medical gentlemen from Illinois and vicinity, the Pacific Coast and the Northwest, who intend to be present at the great jubilee meeting of the ASSOCIATION, are invited to take the JOURNAL SPECIAL, which will go by the Pennsylvania Railway without change from Chicago to Philadelphia. The time limit of ten days is as long as granted by any other route. See advertisement in another column, and make no mistake. The JOURNAL guarantees the most perfect of modern railway equipment.

CORRESPONDENCE.

Food for Diabetics.

NEW YORK, May 18, 1897.

To the Editor:—The articles of Dr. Edward L. Munson in the current numbers deserve attention. It would be better for the profession if the serious chronic diseases were more fully noted and published. I can not fully agree with the Doctor in his deductions, and must put the evidence that has been presented to me against his, and with the evidence which is to come, we will all finally get at the truth.

In an experience more or less closely connected with seven cases of diabetes, I have seen a mortality of about 50 per cent. The treatment has been the use of the best of beef, broiled in the form of steaks, or with the white fibrous connective tissues

removed (which glue connective tissues ferment), and the lean muscle pulp broiled over a good live bed of coals, so that the resultant cake of meat would be of a dark brown color on the outside, and when opened reddish but not raw in color. This served on a hot water plate, properly seasoned with pepper, salt and butter as desired; and if in making the lean muscle pulp, it is not touched directly by the hands, and the cake of meat before broiling is made an inch and a half deep, and not too tightly pressed together, and care taken in broiling to turn often, this resultant cake of meat will be very palatable, and the patient bear the same for a long time. If the beef animal has been over-driven before death, or has been poorly fed, the beef is not good, and will be livery and gelatinous, and ferment in the alimentary tract.

If a patient can eat starches and sugars without their fermenting and adding to the sugar, I allow them to have such, but my plan of treatment has been to stop the fermentation of any kind of food in the alimentary tract, because such fermentation produces carbonic acid and other paralyzing gases, and these gases act directly on the liver, and help to increase the production of sugar. Again, American morphologists have shown for over thirty years that starches and sugars promote alcoholic and acetic acid fermentation in the stomach and bowels. These facts have been confirmed by German chemists. Victor Hugo, in 1862, in his great work "Les Misérables," called attention to the kinship of consumption and diabetes, and to the rôle that sugar and sweets play in acid fermentations, and as a cause of these two diseases. In 1888 I was in Kentucky attending the annual meeting of the State Medical Association. Some of the Louisville doctors were criticising another because he had made a diagnosis of consumption in a case of diabetes, as he had found the tubercle bacilli in the expectoration. I questioned my father, Dr. Ephraim Cutter, afterward about the matter, and he said the diagnosis was correct, as the two diseases may coëxist. It has been my experience to see the sugar increased and the patients made worse by their "spreeing" on sugars and sweets. The hardest thing I have had to contend with has been the adverse circumstances surrounding the patients as to their money matters, and the worry incident to such has helped to cause death. As to prognosis: a young woman in 1888 with not a large percentage of sugar, is living today. I do not know what her condition is, but she is living, and I judge in fair health.

In 1885, as a student, I saw a case in my father's office of a man with enlarged heart, diabetes and Bright's disease; the triad of stigma of albumin, casts and fatty epithelia being present in the urine. This man I again saw in 1890, when he consulted me, my father being in Europe, for a nervous condition he was then in. There was no evidence of Bright's disease or diabetes. A case of a young man in our care three years ago, whose specimens ran up to 1060 and were heavily loaded with sugar, who also had occasionally present the stigmata of Bright's disease, and whose liver dulness extended up the back and side over twice normal dimensions, was tremendously improved by living closely on beef with but little vegetable food. He was greatly hampered in his money matters, could not earn any money, had a wife and young child, and he would occasionally go a-spreeing as to his food, and go into jellies, sweets and fruits, with the result that he would be appallingly sick and nearly die. This case, however, died after two years in Denver of diphtheria. I do not care to go into other details as to patients now, but I must call attention very specifically to one point. It has been considered by the profession for years that beef causes uric acid conditions which lead to coma and death. Now, I feed beef in chronic cases because it has all the chemic elements necessary to nourish the body, and if good beef is rightly prepared, it digests easiest, and can be borne longer as a single article of food than any other element I know of. I do not believe in keeping any patient down to one article of food unless absolutely necessary, but nine-tenths of my work is the handling of chronic cases of diseases, and with some of them I examine specimens of urine from 100 to 200 times in a year. I never have yet seen uric acid, coma and convulsions caused by beef, and I have seen specimens of urine which would deposit full of nitrate of urea on the addition of nitric acid. If my experience in this line was limited to one or two cases, and but a short time, my opinion would be worthless.

Finally, I hope that Dr. Munson and others will give us more of the evidence which they have in the handling of this most serious complaint.

Yours sincerely,

JOHN A. CUTTER, M.D.

Association of Acting Assistant Surgeons U. S. Army.

In reply to a letter concerning the status of this organization, we have the following letter from Dr. Parker:

GROVELAND, MASS, May 12, 1897.

To the Editor:—Replying to your letter, in which you state, as Dr. Shrady and others have done, that "a society which has no time of meeting can not be said to have any pronounced standing," I would state that our Association is fast going to pieces. Acting assistant surgeons no longer exist in the army. The new generation of army medical officers do not know of them except by hearsay. The brave deeds of the acting assistant surgeons have nearly been forgotten. There is no one brave enough and unselfish enough to plead for them. The AMERICAN MEDICAL ASSOCIATION has heard their cry, but has never helped them. Each year our notices have many which are returned with the simple word, *dead*. Our members have toiled hard and faithfully and spent their money generously, but no one in Congress will aid them, so one by one they lose interest and drop out. Of the eighty members remaining only a few can be found in Washington, still less in Philadelphia and New York. To come together would be a tremendous expense, as they are scattered from the Atlantic to the Pacific, from Dakota to Mexico (one member in Mexico). We meet at the call of our president, but can not obtain a quorum, and yet at these late days it is a pleasure to have some form of organization and to continue an effort for right and justice. The acting assistant surgeons have never been appreciated as they deserve to have been. They did magnificent service in the war. Hamilton, Flint, Agnew, Hunt, Morton, Shrady and many others served as such. Since the war almost all the dangerous field service in Indian campaigns was most willingly and faithfully performed by them. Deeds of heroism like that of Dr. Porter on the Custer battle field have been recorded. Will you not allow us the pleasure of legitimate organization, even if we can not meet *every* year? Will you not say a kind word for us and encourage a meeting worthy of the good men and true? I know you would hate to refuse. Hoping to hear favorably, I am, dear doctor,

Sincerely yours, WM. THORNTON PARKER, M.D.

Are Coal-tar Derivatives Incompatible with Mercury?

HOT SPRINGS, ARK., May 15, 1897.

To the Editor:—I am interested in the above query. Some years ago, soon after the introduction of the coal-tar derivatives as antipyretics, I yielded on several occasions to the inclination to prescribe what would seem a reasonable dose of calomel, soda and acetanilid, and in every instance noticed on the part of the patient an alarming distress. The toxic symptoms in each case being a marked griping of the bowels and an elevation of temperature followed by an alarming asthenic condition. I gave up the idea of combining calomel and acetanilid, until recently I was again tempted to use it in the case of a child 3 years old suffering with a gastro-intestinal dis-

order. Convulsions returned more severe with intense pain in bowels, increased tympanites and tenderness, the child dying from exhaustion. I do not think the dose killed the child, for it was almost in a dying condition when I was called to see it; but I am certain that the fateful combination caused a return of symptoms with increased severity. J. C. MINOR, M.D.

Seborrhea and Alopecia.

MILLEDGEVILLE, IND., May 1, 1897.

To the Editor:—I see in the JOURNAL that it has been announced from the Pasteur Institute that M. Sabouraud has established the fact of the identity of the microbe in seborrhea and alopecia. I was very much disappointed by not finding the remedy. Could you tell me in the JOURNAL something that will destroy the microbe and stop the disease? Respectfully yours, J. S. SHIELDS, M.D.

ANSWER—Sabouraud now supplements his discovery of the identity of seborrhea and alopecia (JOURNAL, April 24, page 801), with the results of his research into the causes and mechanism of ordinary baldness, which he summarizes as follows: 1. The specific microörganism of fatty seborrhea introduced into the hair follicles produces there four constant results, sebaceous hypersecretion, sebaceous hypertrophy, progressive papillary atrophy and the death of the hair. These phenomena resulting from the seborrheic infection occur both on the glabrous and hair-covered portions of the body. 2. The vertex is the chosen seat of the infection on the scalp, and chronic fatty seborrhea is therefore the cause of the loss of the hair, which constitutes ordinary baldness. This follicular seborrheic infection is not only indespensable to the evolution of baldness, and baldness does not develop without it, but the same seborrheic infection continues intense, pure and permanent until the baldness is completely and definitely established. 3. Ordinary baldness is therefore a specific microbian affection with distinct characteristics. He adds that these statements are the results of three years' pains-taking research, which he describes more fully in the *Ann. de Derm. et de Syph.*, March, 1897. The therapeutic indications in alopecia and baldness are, therefore, the remedies which have been found effective in seborrhea, especially sulphur.

Acromegaly.

ONEIDA. N. Y., May 24, 1897.

To the Editor:—In your issue of May 22, page 986, Dr. Osborne reports a case which in nearly every particular was like one I had nineteen years ago this month. A man aged 69 years had the disease upward of twenty-five years, and had been able to do light farm work, and had received but very little medical treatment during the whole period. I was first called to see him April 9, 1878, when I found him suffering from general edema, more marked in lower extremities, difficult breathing, irregular action of heart, etc.

In the condition I found him it was difficult to diagnose the case, myxedema from acromegaly. The usual remedies in such cases had but little effect, only palliative, and he died on May 5, being confined to his bed only about one month. Owing to the absence of friends, I did not get a postmortem examination till about eighty hours after death. I found hypertrophy of nearly all the bones throughout the body. Thyroid gland was very large, and the heart weighed *three pounds* and *three ounces*. H. W. CARPENTER, M.D.

The Portable Sterilizer.

DENVER, COLO., May 17, 1897.

To the Editor:—I am pleased to waive any claim of priority for developing or presenting the principle of the "Compact Portable Sterilizer" illustrated in your issue of May 1, and regret that unfamiliarity with the publications of Dr. Carl Beck in regard to his sterilizer made it necessary for me to work this instrument out for myself, and that I should appear to claim that to which I am not entitled.

I shall feel that my labor has not been wasted, however, for it has resulted in giving me a most satisfactory instrument, one I believe to be in a number of essential details a great improvement upon that described by Dr. Beck; the lamp, stand and absence of wire screens and baskets being among them. Its extreme simplicity is one of its best features.

HORACE G. WETHERILL, M.D.

Excessive Doses of Opium.

SAC CITY, IOWA, May 24, 1897.

To the Editor:—I am collecting material for a paper on excessive doses of opium in children, either administered as medicine or taken accidentally. Any readers of the JOURNAL who may have seen such cases in their practice, or met them in any other way, will confer a great favor by sending me an outline of the case with prominent points. In all such cases proper acknowledgment will be made and due credit given.

Yours very truly, CALEB BROWN, M.D.

ASSOCIATION NEWS.

The Philadelphia Meeting.

PHILADELPHIA, May 24, 1897.

To the Editor:—The arrangements are thoroughly completed for the reception and accommodation of those of the profession who expect to attend the semi-centennial meeting to be held in Philadelphia June 1. The Committee of Arrangements has every reason to believe that visitors will be satisfied with the meeting places which have been prepared for them and we are ready to entertain as many of the profession as may honor us by their presence. I append to this letter the latest information in regard to the Section dinners. It is earnestly hoped that all those who belong to Sections, or who intend to belong to Sections, will write to the gentlemen whose names are attached to each notice of a Section dinner, engaging a plate. It will also interest those of the profession who intend bringing their families with them, to learn that an exceedingly active and competent committee of ladies has undertaken to see that all visiting ladies are thoroughly entertained during the hours that the members of the ASSOCIATION are busy in the general meetings or in the discussion of scientific subjects.

Everything promises a most enjoyable meeting and the only thing that the Philadelphia Committee requires now to make the meeting in every way a success is the large attendance which we have been hoping for since it was decided that Philadelphia was to be the meeting place for 1897.

In the name of the committee I desire to earnestly urge all readers of the JOURNAL to make special effort to attend this meeting, which I am sure will be a memorable one in the annals of the ASSOCIATION, largely because of the unusually good scientific program which will be presented in the various Sections. Yours very truly, H. A. HARE, M.D.

SECTION DINNERS.

Section on the Practice of Medicine.—Dinner at the Aldine Hotel, Chestnut above 19th Street, at 7 P.M. $3 per plate. Notify Dr. J. H. Musser, 1917 Chestnut Street, Philadelphia.

Section on Surgery and Anatomy.—Dinner at the Bellevue Hotel, Broad and Walnut Streets, at 7 P.M. $3 per plate. Notify Dr. Orville Horwitz, 1115 Walnut Street.

Section on Obstetrics and Diseases of Women.—Dinner at Hotel Walton, Broad and Locust Streets, at 7 P.M. $3 per plate. Notify Dr. Milo B. Ward, Hotel Walton.

Section on Ophthalmology.—Dinner at Hotel Walton, at 7 P.M. $3 per plate. Notify Dr. G. E. De Schweinitz, 1401 Locust Street, Philadelphia.

Section on Diseases of Children.—Dinner at the Bourse, 5th Street between Market and Chestnut Streets, at 7 P.M. $2

per plate. Notify Dr. Alfred Hand, Jr., 211 S. 17th Street, Philadelphia.

Section on Laryngology and Otology.—Dinner at the Stenton, Broad and Spruce Streets, at 7 P.M. Notify Dr. E. L. Vansant, 1909 Chestnut Street, Philadelphia.

Section on Materia Medica and Pharmacy.—Dinner at Willow Grove Park. Take cars at Broad and Locust Streets, after the session on Tuesday. Notify Dr. Frank Woodbury, 218 S. 16th Street, Philadelphia.

Section on Neurology and Medical Jurisprudence.—Dinner at the Aldine Hotel at 7 P.M. $3 per plate. Notify Dr. Chas. K. Mills, 1909 Chestnut Street, Philadelphia,

Section on Dermatology and Syphilography.—Dinner at Hotel Walton at 7 (?) P.M. $3 per plate. Notify Dr. M. B. Hartzell, 3634 Chestnut Street, Philadelphia.

Section on State Medicine.—Dinner at the Aldine Hotel at 7 P.M. Notify Dr. Elmer Lee, 103 State Street, Chicago, Ill.

Section on Dental and Oral Surgery.—Dinner at the Aldine Hotel at 7 P.M. Notify Dr. E. Talbot, Columbus Memorial Building, Chicago, Ill.

Dinner of the American Medical Editors' Association will be held at the Aldine Hotel, 19th and Chestnut Streets, at 7:30 P.M. $5 per plate. Apply to Dr. Judson Daland, 319 S. 18th Street, Philadelphia.

There is but One Official Program.

NEW YORK CITY, May 21, 1897.

To the Editor:—Replying to yours of the 19th inst., we were approached by a plausible gentleman pretending to represent the AMERICAN MEDICAL ASSOCIATION bearing with him documents apparently proving that he was authorized to take advertisement for the official souvenir program, and upon his assurance as a man of honor that this was the official program we placed contract for one-half page space. Now that we are advised that the official program published by the ASSOCIATION will be issued by you, and will contain no advertisements, we shall refuse to pay for the space contracted for and shall also refuse to consider all propositions hereafter emanating from any source for space in any official program. This is the third time we have been bitten, and the last. Such proceedings on the part of unauthorized individuals do more harm to the AMERICAN MEDICAL ASSOCIATION than its officials probably estimate. Very truly yours, SHARP & DOHME.

President McKinley.—It is officially announced that the President of the United States will be present at the Wednesday morning session of the ASSOCIATION.

Department of Public Health.—There will be a meeting of the Special Committee on "The Department of Public Health," at the Hotel Walton, Philadelphia, at 8 o'clock, P.M., Monday May 31, 1897. U. O. B. WINGATE, M.D.
Chairman of Committee.

Executive or Business Committee.—The first meeting of this Committee will be held in Parlor C, Hotel Walton, cor. Broad and Locust Streets, Philadelphia, on Monday May 31, 1897, at 5:30 p.m. Subsequent meetings will be held at the same place and hour, unless otherwise ordered by the committee, for the consideration of matters referred to it by the ASSOCIATION, and for the transaction of business.

L. DUNCAN BULKLEY, M.D.,
Secretary of Committee.

SOCIETY NEWS.

Ohio State Medical Society.—The fifty-second annual meeting was held in Cleveland and in many features was decidedly successful. The total membership is nearly 900 and about one-third were in attendance. The society took action on the proposed amendment to the State medical laws which provides for the establishment of boards of examiners independent of college faculties. It met with considerable opposition especially from Cincinnati college representatives and at one session the resolution was tabled. But the sentiment of the decided majority could not be thus silenced and on reconsideration the opposition was overwhelmed by the strong arraignment of the college authorities and the manifest endorsement of the provisions of the amendment. Three hundred and twenty-five participated in the annual banquet of Thursday evening. Dr. Dan Millikin, the prince of post-prandial orators, presided and it was demonstrated that this form of entertainment can be made a most potent factor in cultivating the fraternal spirit, in the noblest profession, and securing recuperative relaxation.

It was demonstrated that the Ohio society has outgrown the one section method of presenting papers. Out of an average attendance of 250 there are about 100 who are interested in all kinds of papers. The remaining 150 drift in and out according to what papers are under discussion and thus add to the confusion. Profitable discussions can not be had unless there is close attention. Aimless and useless discussions are tolerated in our State societies to the extent of driving the best men from attendance. The brightest thoughts of the keenest minds *can be* aroused under the influence of convention enthusiasm as in no other manner, and it becomes the duty of the officials to so arrange surroundings that these scintillations of brilliant intellects will be received, appreciated and recorded.

Dr. W. H. Humiston of Cleveland was elected president; Dr. T. Clarke Miller, Massillon; Dr. Geo. Mitchell, Mansfield; Dr. D. H. Brinkerhoff, Fremont; Dr. E. H. Hyatt were elected vice-presidents; Dr. Jno. A. Thompson of Cincinnati, secretary; Dr. H. M. W. Moore, Columbus, asst.-secretary and Dr. James A. Duncan, treasurer. The society is to meet in Columbus in 1898.

Washington State Medical Society.—The eighth annual meeting of the Washington State Medical Society was held at Spokane, Wash., Tuesday and Wednesday, May 11–12, 1897. The following officers were elected for the ensuing year: President, J. B. Eagleson, Seattle; first vice-president, J. J. McKone, Tacoma; second vice-president, D. G. Russell, Spokane; secretary, F. H. Coe, Seattle; treasurer, J. W. Bean, Ellensburg. Seattle was chosen as the place for holding the next meeting.

Montana State Medical Society.—At the annual meeting of this society, held at Helena, the following officers were elected, viz: Dr. G. T. McCulloch of Missoula, president; Dr. B. F. Sandon of Neihart, first vice-president; Dr. C. M. Chambliss of Bozeman, second vice-president; Dr. B. C. Brooke, secretary; Dr. W. M. Bullard, corresponding secretary. The meeting next May will be held in Missoula.

PUBLIC HEALTH.

Secretary of Illinois State Board of Health.—A meeting of the new Illinois State Board of Health was held at Springfield May 24. Dr. J. A. Egan of Chicago was elected secretary, vice Dr. John W. Scott of Springfield, term expired. Dr. Julius Kohl of Belleville was elected treasurer. The board adjourned to meet the last Tuesday in June. It will be recalled that Dr. F. W. Reilly was some time since offered reappointment as secretary, but declined in order to retain the assistant health commissionership in Chicago. Dr. Egan has a splendid army record and gained his appointment in the Chicago Health Department by competitive examination. He is a young man of more than average ability, and is well equipped for his new position.

Hawthorne's Experience in India.—Julian Hawthorne, who was sent to India to describe the scenes of the famine and of the bubonic plague, returned to New York on the steamship *St. Paul* May 22. "The only other correspondent I met in India," he said, "was one from the Reuter News Agency. I spent only thirty days in India, a fortnight in Bombay and a fortnight in the famine district among the native villages. Millions of Hindus and Bengalese died from starvation, and the govern-

ment figures represent one-sixth of the actual deaths from the plague."

The Virginia State Board of Health.—The term of office of the State Board of Health appointed in 1893 expired in March. Their successors appointed the following as members of the State Board of Health for the next four years: Drs. Rawley W. Martin, Lynchburg; Vernon G. Culpepper, Portsmouth; Hugh M. Taylor, Richmond; Landon B. Edwards, Richmond; Paulus A. Irving, Richmond; Lewis E. Harvie, Danville, and J. H. Neff, Harrisonburg. The latter two are new members of the board, succeeding Drs. Robert J. Preston of Marion and Paul R. Carringer of the University of Virginia, who retire. The *State Bulletin* says: "While we welcome most cordially the newly appointed members, Drs. Harvie and Neff, yet we part most regretfully from our old friends, Drs. Preston and Barringer, both of whom are prominent and distinguished in their special work in the profession, and have been useful, suggestive members of the board."

There were in London during 1896, 135,797 births, 83,511 deaths and 79,738 marriages.

Influenza and diphtheria are reported on the increase in London.

NECROLOGY.

CHARLES R. NELDEN, M.D., Bellevue Hospital Medical College, 1864, died May 2 in Stanhope, N. J., aged 55 years. During the war he was a medical cadet, U. S. A., from 1862 to 1864, after which he served a while as an acting assistant and surgeon. He conducted a pharmacy in connection with his practice for twenty-five years and was well known in Sussex County. The cause of his death is given as locomotor ataxia.

CORNELIUS OLCOTT, M.D., died May 2. Born in Jersey City, N. J., Jan. 21, 1828, he was of English descent. In 1849, soon after his graduation from the New York University Medical Department, he took up his life residence in Brooklyn, N. Y., and at once strongly identified himself with its sanitary interests. With the exception of his service as a volunteer surgeon at Fortress Monroe and during the Fredericksburg campaign, he devoted himself to private practice, but without resigning his position on the surgical staff of the Eastern District Hospital. He was also President of the Greenwood Lake Association. He leaves a widow and a son, Dr. Charles A. Olcott.

ROBERT ROSKOTEN, M.D., of Peoria, Ill., died May 8, aged 81 years. He served in the armies of Germany, France, Portugal and the United States; was a profound scholar, speaking several languages fluently. His medical education was acquired at the universities of Halle and Jena. Becoming involved in the revolution of 1848, he was forced to flee and came to the United States. At the breaking out of the Civil War he was one of President Lincoln's first appointees on the board for examination of army surgeons, afterward going to the front and attaining rank of brigade surgeon. Injuries received at Shiloh compelled him to leave the service.

N. P. PEARSON, M.D., an old resident of Chicago, died at his home May 6, aged 72 years. He received his medical education in his native country, Denmark, coming to Chicago in the 50's. For a number of years he was Danish consul in that city and stood high in the estimation of the people.

TRAILL GREEN, M.D., Easton, Pa., died April 29, aged 84 years. Dr. Green was a graduate of the University of Pennsylvania and afterward professor of chemistry in Lafayette College. In 1841 he accepted the chair of natural sciences in Marshall College, and for half a century was a member of the American Association for the Advancement of Science, and became the first President of the American Academy of Medicine, as well as being a prominent member of many other scientific bodies.

C. E. CRANE, M.D., Green Bay, Wis., died May 8, aged 71 years. He was surgeon in the army during the rebellion, afterward President of the Brown County Medical Society, and from 1874 to 1879 mayor of Green Bay.

JOHN CRESSWELL, M.D., who died lately at his home in New Bethlehem, Clarion County, Pa., was a graduate of the Cleveland Medical College, 1857. By his death this community has lost an upright citizen and the medical profession a devoted member. That the evidence of our affection for him may live when we too have gone, we recommend that the following be recorded in our minutes:

WHEREAS, Death has removed from us Dr. John Cresswell, an old and faithful member of our society,

Resolved, Dr. Cresswell by his exemplary life, both as a physician and as a citizen, was endeared to us all; always honorable in his intercourse with his confrères and always kind and sympathetic to the sick and afflicted.

Resolved, We regret his death and mourn with those who are dear to him, but submit in sorrow to his last call.

Resolved, That a copy of these resolutions be sent to the family of the deceased, a copy to the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, and a copy to each of the papers in Clarion.

W. M. CLOVER, M.D.,
I. J. WIREBACH, M.D.,
R. S. WALLACE, M.D.,
Committee.

CHAS. L. BLAKESLEE, M.D., of South Windsor, Conn., died May 2, aged 34 years.——E. C. Bright, M.D., Mt. Sterling, Ky., died at his home May 4.——Geo. W. Burdett, M.D., a graduate of the Dartmouth and Harvard medical schools, at Worcester, Mass., May 10, aged 76 years.——J. J. Ikirt, M.D., East Liverpool, Ohio, May 18, aged 70 years.——Henry Wilson, M.D., Oberlin, Ohio, April 24, aged 56 years.——Robert L. Hartman, M.D., Independence, Pa., April 24, aged 66 years.——Franklin Wayne Entrikin, M.D., Findlay, Ohio, May 13, aged 67 years.——Hugh F. McNairy, M.D., superintendent of the Lakeland Asylum, Frankfort, Ky., May 12.——Joseph R. McLean, M.D., Scranton, Pa., May 5.——Benjamin Eddy Cotting, M.D., for fifty-five years curator of the Lowell Institute, Boston, died May 22, aged 75 years. Dr. Cotting was consulting surgeon to the Boston City Hospital, a fellow of the American Academy of Arts and Sciences, and held diplomas of membership in medical societies in Rome and Athens.——Noah Torrey, M.D., South Braintree, Mass., May 9.——Joseph W. Cushing, M.D., Boston, May 9, aged 60 years.——Frank J. Gould, for twenty-three years clerk of Rush Medical College, Chicago, May 21, aged 53 years.——Alexander J. Mullen, M.D., Michigan City, Ind., May 4, aged 40 years.

MISCELLANY.

Dentistry a very Ancient Profession.—A floating clipping has reached us that Dr. Geist-Jacobi of Frankfort, Germany, has written a history of dentistry from 3700 B. C. to the present time. According to this it is known that there were men practicing the profession of dentistry in Egypt at least 5,000 years ago.

Would Lister Approve?—The Hungarian government permits women to study medicine if they so desire, but one of the professors of the University of Budapest has recently proclaimed that he has something to say in the matter. Of the five women now studying medicine there, one has a remarkably fine head of hair, which the professor of surgery says must come off before she can be permitted to attend his clinics. The reason that he gives for his prohibition is that "wool carries infection."—*Medical Review.*

Precocious Parturition.—Dr. Floyd Young reports the following unusual case from Chilhowie, Virginia. A young white girl, aged 10 years and 2 months, daughter of respectable parents, gave birth to a fully matured child weighing three pounds. The parents seemed to know nothing of the condi-

tion of the little woman, and on the night of her confinement they thought she was suffering with colic, hence sent for no physician, and knew no better until they heard the cry of the child. The girl was well developed in every respect, having menstruated regularly since she was 2 years old. The baby was not allowed to nurse and only lived a few weeks.—*Bulletin of the Virginia Health Board.*

Suicides in Times of Financial Depression.—It is stated as a fact that in 1890 the number of suicides was 2,040, in 1891 3,531, in 1892 3,860, in 1893 4,436, in 1894 4,912, in 1895 5,759, and in 1896 6,420, and these all occurred in the United States. What relation has this to the general business depression, and the consequent inability to provide for the family, if any, and is the same increase shown during other times of financial depression? The records of insurance companies ought to be particularly interesting as to these statistics. Among those who have considered the subject the incontestable policy is blamed very largely for the enormous increase in self-destruction.—*Medical Examiner*, April.

Liability of Physician Making Examination for Third Party.—Where a physician undertakes to examine a person, and to report whether he is diseased, the supreme judicial court of Massachusetts holds, in Harriott v. Plimpton, Oct. 21, 1896, that he is bound to have the ordinary skill and learning of a physician, and to exercise ordinary diligence and care. If he fails, and the person examined is injured because of his want of such skill and learning or his want of such care, he is answerable in damages. The fact that the purpose of such examination is information and not medical treatment is, in the opinion of the court, immaterial. But the breaking of a marriage engagement of the person examined, in consequence of a wrong diagnosis, the court considers too remote a damage to sustain an action. Whether the physician has used ordinary care, learning and diligence is, upon the evidence, for the jury to determine. When the physician's subsequent conversations with third parties on the subject of the examined person's condition are had under circumstances which justify him in communicating the information, the court further holds that the absence of express malice is a defense to an action for slander.

Alcoholic Fermentation Produced by the Fluids of the Living Cells.—By crushing yeast cells and compressing the crushed cells with a pressure of 400 to 500 atmospheres, E. Buchner has obtained a clear, yellow fluid containing over 10 per cent. of solid particles, largely albumin. After filtration, which eliminates every vestige of the living cells, the fluid displays the extremely important property of producing alcoholic fermentation, namely, converting glucose into alcohol and carbonic anhydrid. "These results are the complete refutation of the hitherto accepted ideas that fermentation is only associated with the presence of the living cells, and opens new paths for biologic and bacteriologic investigations, by which pathology and possibly also therapeutics may benefit." Buchner claims priority over Koch in this mechanical crushing process, which is the basis of Koch's new tuberculin. His description of the process was published last January. He also states that he offered to patent it for the firm now manufacturing the tuberculin, who refused after long deliberation.

Doctor's Bills as Expenses.—In actions for personal injuries, in order to recover for medical attendance and similar items, the supreme court of Nebraska says, in Golder v. Lund, March 3, 1897, that it is necessary for the plaintiff to show two facts: First, what expense he actually incurred; and, secondly, that it was reasonably incurred. It is not the reasonable charge for medical services which he may recover, but the expense to him of such services, not to exceed their reasonable value. But in order to recover in such an action for expenses of medical treatment, the court further holds, it is not necessary to prove by the record that the physician rendering the services was licensed to practice under the statute. Proof that he practiced as a physician raises the presumption in actions between third parties that he was licensed to do so.

A Contemptible Misrepresentation.—The New York *Medical Record* of May 22, 1897, contains the following:

Dr. John B. Hamilton, formerly of the Marine Hospital Service under Surgeon-General Wyman, has gone to the Illinois Northern Hospital for the Insane at Elgin, to assume the duties of superintendent. We understand that, while abandoning his extensive surgical practice in Chicago, he will still be retained as editor of the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. Hamilton was formerly the head of the Marine Hospital Service and from 1879 to 1891 Dr. Wyman served under him. From 1891 to 1896 he was a surgeon in the Marine Hospital Service stationed at Buena Park, near Chicago. Elgin is just beyond the border of Cook County, only a short run by rail. Dr. Hamilton does not abandon anything. It is pleasant to know from the *Record* that he will be retained as editor when the Trustees meet again, and it is to be hoped that Messrs. Wm. Wood & Co. will retain Dr. Geo. F. Shrady for at least another year. It has lately been suspected that some lineal descendent of Ananias, with an exaggeration of the family traits, was temporarily occupying Dr. Shrady's stool.

The Illinois Health University Ousted.—The supreme court of Illinois affirmed, April 3, 1897, the judgment of ouster in the quo warranto proceedings, brought on the relation of the attorney-general, against the Illinois Health University. The latter was incorporated, under the laws of Illinois, April 16, 1895, "for the education of teachers in the science of health and the true art of healing, and fitting men and women for the rights and duties of citizenship, and of conferring upon such teachers, when duly qualified, such diplomas, such degrees or certificates of qualification, as may seem proper and just to the officers and faculty of the institution." The supreme court, speaking through Mr. Justice Carter, says that there was sufficient alleged in the information filed by the attorney-general to show that the "University" had assumed and usurped powers, privileges, and franchises not conferred by its charter; that it had not in good faith carried out the object for which it was incorporated, but was engaged in the fraudulent business of selling medical diplomas to, and conferring the degree of doctor of medicine upon incompetent persons, for gain; that it did not conduct a medical school, college, or university, and that its pretended business of educating teachers in the science of health and in the true art of healing, and of fitting men and women for the rights and duties of citizenship, and of conferring upon such teachers, when duly qualified, such diplomas, such degrees or certificates of qualification, as might seem proper and just, etc., was a mere pretense. It is not consistent with the public policy of a State which enacts stringent laws for the preservation of the public health, and for the protection of its people from quacks and ignorant pretenders to a knowledge of the science of medicine and surgery, continues the court, to authorize or permit a pretended health university to turn any one, whether known or unknown, qualified or unqualified, into a doctor of medicine, armed with a diploma and degree as one qualified to heal the sick, who may answer its prescribed list of questions and pay its prescribed fee. The charter of a corporation is the full measure of its power, and, if any doubt arises out of the language employed in such charter, such doubt must be resolved in favor of the State. By demurring to, instead of answering and denying the charges in the information, the court adds that it stood admitted that there was a wilful misuse and abuse of the powers conferred on this corporation, and a prostitution and perversion of its corporate powers to objects and purposes for which no certificate of incorporation could be properly issued, and which would be against the policy of our laws. It was a clear abuse of the liberal privileges conferred by our incorporation laws for the Illinois Health University to make use of them for the purposes set forth in the information. And for such abuse and misuse, the supreme court holds, its charter might and should be revoked.

New York.

THE CRAIG COLONY OF EPILEPTICS.—Governor Black of New York State has signed the bill appropriating $126,600 for the Craig colony of epileptics. The State Board of Charities, who have been clothed with ample powers, believe that the colony will be in time self-supporting since it is largely an agricultural institution, with nearly 1,800 acres to its credit. The claim is that the above-named appropriation will benefit some six hundred dependents now waiting for the improvements.

THE NEW BELLEVUE FACULTY.—The professorial staff of the recently combined University and Bellevue Colleges of New York city has been formed by choice from some of the old timber from both schools and by the importation of some from the outside. Of the latter, Prof. J. G. Adami from the McGill College of Montreal is to occupy the important chair of pathology; he was formerly an instructor at Cambridge University, England. Dr. Austin Flint takes the subject of physiology. Dr. E. G. Janeway will give clinical instruction; Dr. LeFevre will serve as secretary. The other members of the faculty, so far as has been announced, are Dr. H. M. Biggs, public medicine and infectious diseases; Dr. J. D. Bryant, applied anatomy and clinical surgery; Dr. I. S. Haynes, practical anatomy; Dr. H. P. Loomis, materia medica and therapeutics; Dr. W. T. Lusk, obstetrics; Dr. W. M. Polk, gynecology; Dr. A. A. Smith, medicine; Dr. L. A. Stimson, surgery; Dr. W. G. Thompson, medicine; Dr. R. A. Witthaus, chemistry, physics and toxicology, and Dr. G. Woolsey, anatomy. Emeritus professors—Drs. R. O. Doremus, A. E. McDonald, C. I. Pardee, L. A. Sayre, W. H. Thomson and H. G. Piffard. Assistant professors—Drs. J. C. Edgar, J. F. Erdman, F. W. Gwyer, E. LeFevre, J. A. Mandel, G. T. Stewart and I. Sickles. Clinical and special professors—Drs. S. Alexander, G. Bacon, F. H. Bosworth, C. S. Bull, C. G. Coakley, E. B. Dench, F. S. Dennis, E. D. Fisher, A. Flint, Jr., J. A. Fordyce, C. F. McDonald, P. A. Morrow, W. P. Northrop, H. D. Noyes, C. E. Quimby, B. Robinson, R. H. Sayre and J. E. Winters.

Washington.

DR. RALPH GALLINGER'S PROMOTION.—Dr. Ralph E. Gallinger, son of Senator Gallinger, who spent the past year in the French Hospital in New York city and the Emergency Hospital in this city, has accepted an appointment as house officer in the Boston City Hospital, and is now at his new post of duty.

ILLEGAL PRACTITIONERS FINED.—During the past month three illegal practitioners of medicine have been fined and ordered to stop operating in the District of Columbia.

MEDICAL SOCIETY.—During the past month some very interesting work has been done in the medical society, viz.: Dr. Kober read a paper entitled "The Relations of Predisposition and Heredity to Disease;" Dr. James Kerr "Nephrectomy for Malignant Disease," case and specimen; Dr. Lamb "Hydatidiform Mole," case and specimen, Dr. D. K. Shute "Heredity with Variations;" Dr. A. A. Snyder "Esophagotomy for Removal of Foreign Body," case and specimen; "Appendicitis," case and specimen; Dr. Lamb "Spina Bifida" case and specimen; "Cerebral Hemorrhage," Dr. Bovee, specimens showing complicating tubal and ovarian suppuration; Dr. Wm. W. Johnston, "The Effect of School Life on the Health of Children." This latter was a most valuable paper showing the work which had been done in this direction in foreign countries and its neglect in this country. The paper was fully demonstrated by charts showing percentages of relations of different diseases with respect to age, sex, kind of study and varied defects.

GARFIELD HOSPITAL.—Dr. W. W. Johnston has resigned from the staff of the Garfield hospital and criticises some recent acts of the Board of Directors.

CENTRAL DISPENSARY AND EMERGENCY HOSPITAL.—Dr. Wm. P. Carr, Professor of Physiology in the Columbian Medical College, has been elected a member of the attending staff.

Colleges.

THE NEW YORK UNIVERSITY MEDICAL DEPARTMENT held its fifty-sixth annual commencement at Carnegie Hall May 2, and will reopen October 1 under the name of the New York University Bellevue Medical College. The number of graduates was 103 and they are the last of the three-year course men. Medals and prizes were distributed and the speakers duly emphasized the importance of hard work.

AT THE annual commencement of the Woman's Medical College of Kansas City, April 22, three young women received diplomas.——The degrees conferred by the University of Buffalo (N. Y.) April 27, in the department of medicine, number seventy-four.——Niagara University has just graduated ten new doctors.——The New York Medical College and Hospital for Women had seven young women graduates this year.——The class of 1900, College of Physicians and Surgeons (N. Y.), recently presented Prof. C. F. Chandler with a loving cup in token of his twenty-five years' service in the college.——The graduates of Albany Medical College, at the recent commencement numbered 60; those of Jefferson Medical College 164, of the Medico-Chirurgical College, Philadelphia, 66; of the Medical College of Virginia 33, with 15 more from Georgetown University and 24 from the Columbian University, Washington, D. C.——Stephen Smith, M.D., a graduate of the College of Physicians and Surgeons (N. Y.) and professor of surgery in Bellevue Hospital, has donated 1,500 volumes to the medical library of Syracuse University.——Twenty-eight young women received diplomas from the Woman's Medical College, Philadelphia, May 19.——Among the twenty-two graduates from Howard University Medical Department May 10, were six young women.

Hospitals.

ACCORDING to the twenty-fifth annual report of Roosevelt Hospital, New York city, the number of patients during 1896 was 3,118. The daily average was 140, and the number treated in the accident room, but not detained, was 5,128. A training school of nurses was established November 16 and the private patients' pavilion opened two days later. The expenses have been considerable, and an appeal is made for additional contributions. Meanwhile charter applications for the hospital and dispensary of the Pasteur Institute, as well as for St. Bartholomew's clinic, have been denied by the State Board of Charities. The reasons given for the refusal in the case of the latter are that the "vicinity is fully supplied with institutions for medical relief of the sick poor, and that the policy of the board is to discourage unnecessary increase of charities of this kind, etc." The motto adopted seems to be "Divide and conquer."

THE net proceeds of the festivities in Los Angeles, Cal., attendant upon the Queen's Diamond Jubilee, are to go to the Good Samaritan Hospital of that city. It is believed that $4,000, the amount necessary for a new wing, will thus be raised.——An addition to the Monte Vista (Colo.) Hospital, costing $2,000, has been decided on.——The new buildings of the Plant System Hospital, Waycross, Ga., have just been opened to patients, cost $45,000.——Between June 1 and Oct. 1, 1896, about 4,000 children were given the benefits of La Rabida Sanitarium, Jackson Park, Chicago. During the six months that this old convent was open the management paid the car fares of more than 1,500 people who otherwise would have been prevented from enjoying the benefits of La Rabida. The work will begin again June 1.——During the year ending April 1, 1897, Augustana Hospital, Chicago, cared for 938 patients; two-fifths of these without cost.——The new annex to Michael Reese Hospital, Chicago, cost $13,000, was recently opened. It was the gift of Jacob Rosenburg.——In 1896, 2,104 patients were admitted to the Alexian Brothers' Hospital, Chicago. The new buildings 307 x 226 feet exterior, are now in process of construction.——The Victoria Diamond Jubilee Association of Chicago, invites contributions toward the endowment of hospital beds in Chicago, in celebration of the sixtieth anniversary of Queen Victoria's reign.——An addition to the gynecologic department of the Johns Hopkins Hospital, costing $10,000, is under construction.——Elizabeth T. L. Warren, late of Brookline, Mass., has bequeathed property to the value of

$65,000, for the establishment of free beds in the Massachusetts General Hospital.——The building fund of the Eastern Maine General Hospital has been increased to $20,000 by a gift of $200 from Mrs. T. N. Egery of Bangor. This puts the hospital in the way of receiving larger sums which were conditionally promised.——Charles H. Senff, Whitestone, L. I., has donated $10,000 to the Flushing (L. I.) Hospital.——St. Joseph's (N. Y. City) treated 1,331 indoor patients in 1896, and 2,956 outdoor cases.——The Kelly donation to St. Vincent's (N. Y. City) is $50,000.——The Mount Sinai Hospital (N. Y.) reports 3,106 patients admitted in the year 1896, while the dispensary treated 33,694.——St. Margaret's Hospital, Pittsburg, is almost under roof. Mr. J. H. Shoenberger bequeathed $250,000 for the building alone, his entire bequest for hospital purposes being $800,000.——Mrs. Felix R. Brunot, Pittsburg, has notified the board of foreign missions of the Protestant Episcopal church, that she will build and endow, in any part of China which they may select, a hospital for lepers. She prefers Shanghai.——The old Pennsylvania Hospital (Phila.) was founded by members of the Society of Friends, and was the first general hospital in the country to open its clinics to women medical students.——The Baltimore Hebrew Hospital and Asylum Association receive $200 by the will of the late Solomon Katzenberger.——After June 1, the Stormont Hospital, Topeka (Kan.) will cease to be a hospital for women, and admit general cases.

Societies.

COLORADO STATE MEDICAL SOCIETY.—The twenty-seventh annual convention of the Colorado State Medical Society will be held in Denver June 15, 16 and 17. Thirty-two names are on the program and a large attendance is expected.——The one hundred and sixth anniversary meeting of the New Hampshire Medical Society was held May 24 and 25 at Concord.——The annual meeting of the Berkshire district medical society was held in Pittsfield, Mass., April 29. The following officers were elected: President, Henry Colt, Pittsfield; vice-president, M. M. Brown, North Adams; secretary, L. C. Swift, Pittsfield. The society has a membership of forty.——The Middlesex county medical society held its one hundred and fifth annual meeting at Haddam, Conn, April 23.——The New Mexico Medical Association convened at Albuquerque May 12.——The fifty-third annual meeting of the American Medico-Psychological Association was held in Baltimore May 11 to 14.——The Iowa State Medical Society held its forty-sixth annual session at Marshalltown May 19 to 21.——The regular quarterly meeting of the Illinois and Iowa Medical Society took place at Rock Island April 22.——The Kansas Medical Society closed its annual meeting at Topeka May 14.——The Detroit Medical and Library Association recently adopted resolutions urging the passage of the Michigan Medical League Bill.——Detroit will be the next place of meeting of the Michigan State Medical Society, which met May 13 and 14 at Grand Rapids.——The physicians of Piatt County (Ill.) have recently organized a Piatt County Medical Society.——The semi-annual convention of the Minnesota Valley Medical Association convened at Mankato May 11.——The Central District Medical Society of Missouri met at Sedalia May 6 and the Southwest Missouri District Medical Society at Springfield May 13.——The following recent conventions in New York are noted: Cattaraugus County Medical Society, at Salamanca, May 11; Madison County, at Oneida, May 11; Onondaga County, at Syracuse, May 11; Orange County, at Goshen, May 4; Orleans County, at Albion, May 12; Oswego County, at Oswego, May 11; Westchester County, at White Plains, May 7; Utica Medical Library Association, Utica, May 12.——The one hundred and sixth anniversary of the New Hampshire Medical Society was celebrated at Concord May 24 and 25.——The Ohio State Medical Society closed its annual convention at Cleveland May 21.——The seventh annual session of National Association of Military Surgeons convened at Columbus, Ohio, May 25.——The Logan County Medical Society met May 14 at Bellefontaine, Ohio; the Union Medical Association, at Salem, May 6; the Guernsey Co. Medical Society at Cambridge, May 11.——The annual session of the Pennsylvania Medical Society convened at Pittsburg May 18.——The sixty-fourth annual meeting of the Tennessee Medical Society was held May 11, at Nashville.——Cameron, Texas, entertained the Brazos Valley Medical Association May 12.——The Franklin County Medical Society met at St. Albans (Vt.) May 11.——The fifty-first annual convention of the Wisconsin State Medical Society closed, at Racine, May 7.——The Southwestern Kentucky Medical Association held its semi-annual session at Paducah May 10.

THE PUBLIC SERVICE.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from May 15 to 21, 1897.

Capt. Edward C. Carter, Asst. Surgeon, leave of absence granted is extended two months.

Major George W. Adair, Surgeon U. S. A. (Washington Bks., D. C.), is granted leave of absence for one month.

Capt. Charles E. Woodruff, Asst. Surgeon, is relieved from duty at Ft. Sheridan, Ill., to take effect June 1, 1897, and ordered to Ft. Custer, Mont., for duty.

First Lieut. Powell C. Fauntleroy, Asst. Surgeon, is relieved from duty at Ft. Niobrara, Neb., to take effect upon the arrival at that post of Capt. Philip G. Wales, Asst. Surgeon, and ordered to Ft. Robinson, Neb., for duty.

First Lieut. Charles Lynch, Asst. Surgeon, is relieved from duty at Ft. Robinson, Neb., to take effect upon the arrival at that post of Lieut. Fauntleroy, and ordered to Ft. Sheridan, Ill.

Lieut.-Col. William E. Waters, Deputy Surgeon-General, will be relieved from duty at Columbus Bks., Ohio, on July 15, 1897, and will then proceed to his home, where, at his own request and for his own convenience, he is authorized to await retirement.

PROMOTIONS.

To be Asst. Surgeons with rank of Captain after five years' service: First Lieut. Champe C. McCulloch, Jr., Asst. Surgeon, May 5, 1897; First Lieut. Frederick P. Reynolds, Asst. Surgeon, May 5, 1897; First Lieut. Isaac P. Ware, Asst. Surgeon, May 5, 1897; First Lieut. Robert S. Woodson, Asst. Surgeon, May 5, 1897: First Lieut. Madison M. Brewer, Asst. Surgeon, May 5, 1897; First Lieut. George D. De Shon, Asst. Surgeon, May 5, 1897.

CHANGE OF ADDRESS.

Angear, J. J. M., from 482 W. Lake St. to 143 S. Western Av., Chicago.
Bell, S. D., from Pinehurst, N. C., to Butler, Pa.
Berry, Wm. F., from Neillsville, Wis., to LaFayette, Ind.
Blair, P. B., from Chicago, Ill., to 274 E. 5th St., Winona, Minn.
Bower, C. L., from 26 S. 18th to 1937 Vine St., Philadelphia, Pa.
Chandler, F. C., from 1317 to 1236 Noble Av., Chicago, Ill.
Cleveland Medical Gazette from 837 Superior St. to 812 Prospect St., Cleveland, Ohio.
Crocker, Geo. L., from Chicago to Springfield, Ill.
Gillman, R. W., from 76 Lafayette Av. to 107 Fort St. West, Detroit, Mich.
Hawley, A. W., from Chicago to Illinois Eastern Hospital, Hospital, Ill.
Heise, W. F. C., from 251 to 245 S. Winchester Av., Chicago, Ill.
Harrison, W. K., from 32 Delaware Place to 52 Walton Place, Chicago.
Kempker, J. F., from Valley Junction to Mercy Hospital, Des Moines, Iowa.
Klebs, A. C., from Citronelle, Ala., to 602 Stewart Bldg., Chicago, Ill.
Lancaster, W. B., from Wellesley Hills to 719 Boylston St., Boston.
Montgomery, Liston H., from Central Music Hall to Stewart Bldg., Chicago, Ill.
Ohage, J., from 245 to 241 E. 7th St., St. Paul, Minn.
Porterfield, Jr., John D., from Chicago, Ill., to Cape Girardeau, Mo.
Packard, J. H., from 26 S. 18th St., to 225 S. 16th St., Philadelphia, Pa.
Ritter, C. L from 510 to 846 Virginia Av., Indianapolis, Ind.
Storrs, W. D., from 330 to 616 Kansas Av., Topeka, Kan.
Tolotson, H. T., from 6301 Yale Av. to 6256 Wentworth Av., Chicago, Ill.
Tappey, E. T., 141 W. Fort St. to 270 Woodward Av., Chicago, Ill.
Tasche, J. C., from Howard to Franklin, Wis.
Vincent, D., from Cleveland to Youngstown, Ohio.
Williams, Robt. F., from Richmond to Warm Springs, Bath Co., Va.

LETTERS RECEIVED.

American Journal Publishing Co., St. Louis, Mo.; Armstrong, Hopkins S., Chincoteague, Va.; Ames, Delano (2), Baltimore, Md.; Atkinson, W. B., Philadelphia, Pa.; Austin, Lewis K., Clinton, Me.

Bremer, Ludwig, St. Louis, Mo.; Beck, Carl, New York, N. Y.; Brittin, A. L., Athens, Ill.; C. F. Boehringer & Soehne, New York, N. Y.; Burlingame, D. E., Elgin, Ill.; Bogie, M. A., Kansas City, Mo.; Bell, H. S., Kearney, Neb.; Burd, E., Lisbon, Iowa.

Chicago Eye, Ear, Nose and Throat College, Chicago, Ill.; Crittenton Co., the Chas. N., New York, N. Y.; Cheney, Wm. Fitch, San Francisco, Cal.

Devine, Chas. A., Ann Arbor, Mich.; Davis, N. S., Chicago, Ill.; Doliber-Goodale Co., 2, Boston, Mass.

Elliott, A. R., New York, N. Y.

Fessenden Mfg. Co., The (2), Pittsburgh, Pa.; Fassett, Charles Wood, St. Joseph, Mo.; Fidelity Mutual Life Association, Philadelphia, Pa.; Ferguson & Goodnow, Chicago, Ill.

Gotwald, D. K., Springfield, Ohio; Gotham Co., The, New York, N. Y.

Herdman, W. J., Ann Arbor, Mich.; Hatch, H., Quincy, Ill.; Hare, H. A., Philadelphia, Pa.; Hotel Walton, Philadelphia, Pa.; Hunter, James, Westville, N. J.

Imperial Granum Co., New Haven, Conn. (2.)

Jones, Mary A. D., New York, N. Y.

Keasby & Mattison Co., Ambler, Pa.; Krafft, Wm., New York, N. Y.

Long Island College Hospital, Brooklyn, N. Y.; Londonderry Lithia Spring Water Co, Nashua, N. H.

Morse, Lyman D., New York, N. Y.; Musser, J. H., Philadelphia, Pa, May, W. L., Guin, Ala.; Mather, E., Paterson, N. J.; Marvin, S. B., Cincinnati, Ohio; Malsbury, L. O., Peru, Ind.; Malsbary, G. E., Cincinnati, Ohio; Montborne, H. P., Spokane, Wash.

Proctor & Gamble Co., Cincinnati, Ohio; Parke, Davis & Co., Detroit, Mich.

Richardson, J. R., Chicago, Ill.; Rosenthal, Edwin, Philadelphia, Pa.; Ray, J. M., Louisville, Ky.

Schering & Glatz (2), New York, N. Y.; Saxlehner, Andreas, New York, N. Y.; Sharp & Dohme, New York, N. Y.; Souchon, Edmond, New Orleans, La.; Sanitas Food Co., Battle Creek, Mich.; Shastid, T. H., Galesburg, Ill.; Stearns, Frederick, & Co., Detroit, Mich.

Upjohn Pill and Granule Co., Kalamazoo, Mich.

White, A. J., New York, N. Y.; Wyeth, John, & Brother, Philadelphia, Pa.; Williams, Brown & Earle, Philadelphia, Pa.; White, James B., Montgomery, Minn.; Wegge, Wm. F., Oshkosh, Wis.; Walker, J., Leeds, England; Wilson, Norton L., Elizabeth, N. J.; Wampole, H. K., & Co., Philadelphia, Pa.